



THE
GRECC FORUM ON AGING

GERIATRIC RESEARCH, EDUCATION & CLINICAL CENTER

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The ABC's of ICU Recovery



Dr. Wes Ely (L) and Dr. Timothy Girard (R) of the Nashville GRECC and Vanderbilt University

**Focus on Function:
 Nashville's Fight against
 Fat and Inflammation**

For many, summer reveals the few extra pounds packed on for winter warmth. This additional padding can impact more than just the waistline or one's comfort wearing a swimsuit. This is particularly true for our older veterans, for whom additional weight raises the risk for endocrine dysfunctions such as insulin resistance and diabetes. The physical and cognitive problems associated with these conditions are well documented by several researchers across the VA system, including several sites with a focus on functional declines. One such example is the excellent work of Dr. Kathleen Figaro and her colleagues at the Nashville GRECC, who are examining the links between diabetes, inflammation, and functional decline in older adults.

Based on the premise that chronic diseases such as obesity-related diabetes increase one's risk for disability, Dr. Figaro and

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The costs of extended intensive care unit (ICU) stays are multifaceted, with heavy financial, time, and staff burdens. Furthermore, extended ICU stays are sometimes unnecessary and may be deleterious to patients, according to Dr. Wes Ely, Nashville GRECC Associate Director of Aging Research and Professor of Medicine at Vanderbilt University. Dr. Ely and colleagues have developed a protocol designed to liberate ICU patients from mechanical ventilation sooner, thereby facilitating an earlier, successful discharge from the ICU and the hospital. Dr. Ely and Dr. Timothy Girard of the Vanderbilt University School of Medicine recently presented findings from their work at the American Thoracic Society's 103rd International Conference.

Sponsored by the Nashville VA,

the Saint Thomas Foundation and the National Institute on Aging, the Awakening and Breathing Controlled (ABC) Trial was coordinated at Vanderbilt University and conducted at Saint Thomas Hospital in Nashville as well as at the University of Chicago and the University of Pennsylvania. The protocol studied consists of two steps: first, the patient undergoes a "spontaneous awakening trial" (SAT) during which sedative infusions are turned off and patients are monitored to see if they can comfortably proceed. During the second step, called the "spontaneous breathing trial" (SBT), patients are allowed to try breathing on their own without substantial help from the ventilator. Patients were monitored carefully during both steps and

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Focus on Function *(Continued)*

colleagues set out to examine the mechanism driving this relationship. Inflammatory markers were identi-



Dr. Kathleen Figaro

fied as one set of likely conspirators, including C-reactive protein (CRP) and interleukin-6 (IL-6). Using a cohort of 2,895 high functioning older adults, the authors evaluated the degree to which type 2 diabetes and levels of both inflammatory markers predicted later functional decline. At baseline, almost a quarter of all participants

were found to have diabetes, with higher prevalence among those who were obese, of African-American heritage, and male. Diabetes was also accompanied by significant elevations in CRP and IL-6. Over the next three-and-a-half years of follow-up, those with diabetes were significantly more likely to develop functional limitations. However, after controlling for several demographic and clinical factors, diabetes alone was not a significant risk factor. Inflammation also appeared to be an independent risk factor that was equally associated with declines in function independent of diabetic status at baseline. This risk appears to increase in the presence of obesity; obese participants with diabetes were almost twice as likely to

develop functional limitations compared to diabetic participants of normal weight.

Based on these findings, Dr. Figaro and colleagues recommend early detection and treatment to reduce inflammation and maintain function. Their suggestions include using these findings to identify patients who are at the greatest risk of disability and implementing strict glucose control and intervention with aspirin and statins.

As part of her ongoing work in chronic diseases associated with aging, Dr. Figaro and colleagues are now examining the relationships between social engagement and physical disability. ■

Views from VACO

“...the Development of Improved Models of Clinical Services for Older Veterans”

The GRECCs came into existence in 1980 under the auspices of Title III (Geriatric Research and Care”) of Public Law 96-330. In addition to tasking them with the conduct of “geriatric and gerontologic research” and “training of health professionals in the provision of health care for older individuals”, the law also stated that GRECCs had a clinical mission, and that mandate is the subject of this essay.

In 1980, there were few programs either within or outside VA focusing on acute or long term care needs of older Americans. In passing 96-330 into law, Congress committed federal resources to assess the current state of the art, identify areas for improvement, and undertake those enhancements. President Carter’s signature on the bill was an endorse-

ment that the VA would lead US healthcare in turning its sights on addressing the needs of an expanding elderly population.

The clinical identity of GRECCs has been the most misunderstood of its three missions—largely because GRECCs have matured the discipline of geriatrics and the changes in the discipline have dictated periodic re-interpretations of the mission. First, when 96-330 became law, there was no limit to the range of care models and treatment options to “develop”—because there were so few in place. As the field gained an identity and standards of care evolved, “development” has of necessity given way to a growing focus on “improvement.”

Second, GRECCs were never intended to be the providers of mainstream geriatric services: sites successful in their applications to acquire GRECCs already had established programs and then received additional positions and resources to constitute the GRECC. Yet time and again a GRECC,



Ken Shay, DDS, MS

having developed a successful model, would seek to pass responsibility for that service to the hosting medical center so it could redirect GRECC resources to new challenges. But without unlimited budgets, VAs didn’t have the resources to bring in new staff. GRECCs were faced with sustaining the programs they created (which meant no staff freed to undertake additional innovations)—or abandoning them and the patients they served (which was an option that seemed unsettling at best and inhumane at worst). Many GRECCs ended up serving as the sections of clinical geriatrics at their stations: contributions appreciated locally but

The ABC's of ICU Recovery

(Continued)

treatments were resumed if necessary.

To study this protocol, Dr. Ely and colleagues enrolled 335 critically ill ICU patients receiving sedative medications and mechanical ventilation. Patients were randomized to either the "wake up and breathe" study group, consisting of daily SAT and SBT trials, or a Usual Care+SBT control group. Compared to the control group, patients receiving the "wake up and breathe" treatment spent four fewer days in the ICU and hospital, 3 more days breathing without assistance, and two fewer days in coma. Forty-seven patients in the experimental group died, compared to 58 in the control group.

These dramatic results have direct implications for the way patients are cared for in the VA system and in hospitals around the world. Dr. Ely estimates that implementing the protocol could save hospitals \$5,000 to \$15,000 per patient per stay by eliminating days of unnecessary ICU treatment.

Dr. Ely and colleagues are now taking this innovative line of clinical research further by examining potential cognitive benefits of the "wake up and breathe" approach. The VA Merit-funded MIND-ICU study (Measuring the Incidence and determining risk factors for Neuropsychological Dysfunction in ICU Survivors) is based on the premise that drug exposure during an extended ICU stay may increase one's risk of cognitive impairment and acquired dementia. Early interruption of sedative drugs — the 'awakening' step — could improve long-term cognitive outcomes. The multisite study will be carried out at VA Medical Centers in Seattle, Nashville, and Salt Lake City. Future editions of the Forum will provide updates on this groundbreaking work by Dr. Ely and colleagues.

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Presidential Poster Award for GLA GRECC Fellows

The Greater Los Angeles GRECC is pleased to announce that two of our Geriatric Medicine Fellows were honored with the Presidential Poster Award at the recent scientific meetings of the American Geriatrics Society. **Dr. Namira Jamshed-Querishi** investigated how cognitive impairment affects functional recovery during acute rehabilitation in the nursing home. She found that, while cognitive impairment is an important predictor of recovery, functional recovery is significant and persons with cognitive impairments should not be precluded from receiving rehabilitation in nursing home settings.

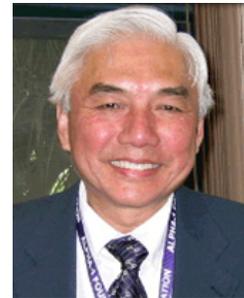
Dr. Alia Khan-Hudson investigated sleep disturbances in assisted living facilities, a common but rarely studied setting. She found that sleep disturbances are common. More daytime sleep was associated with worse cognition, restless leg syndrome and pain; nighttime awakenings were associated with sleep apnea. Future research should address these and other factors contributing to sleep disturbance.

Their research was mentored by **Cathy Alessi, MD**, Associate Director for Clinical of the GLA GRECC, **Jennifer Martin, PhD**, GRECC research psychologist and **Karen Josephson, MPH**, GRECC health science specialist.

Awards & Announcements

Dr. Herman Cheung, VA Senior Career Scientist and Miami GRECC Investigator, was recently invited to participate in a unique international program known as "Engineering for the Americas."

Established by the University of Miami, Florida, and the University of Rochester, New York, this program creates opportunities for students to have a distinctive international experience, meet industry leaders, and enhance their education with topics beyond the core curriculum. In this inaugural program year, 40 top engineering students from universities in Argentina, Brazil, Canada, Chile, Ecuador, Panama, Mexico, and the USA attended the sessions. Dr. Cheung presented on stem cells and tissue engineering.



Dr. Herman Cheung

Dr. Emily Jaffe of the Pittsburgh GRECC has been selected by the VA Pittsburgh Healthcare System as the 2007 Outstanding Primary Care Physician of the Year. Dr. Jaffe was recognized for her dedication to excellence in patient care and for her outstanding contributions to education, performance improvement, and innovations in healthcare. She is recognized also for the development of the Geriatric Palliative Care Unit and for her promotion of extensive patient and family education to meet the challenges of decision-making related to cure vs. comfort care.

Views From VACO
(Continued)

detracting from the GRECC's role as a regional source for clinical innovation.

Finally, innovations need to be tracked and evaluated in order to judge whether they do what they intend and how they compare to other models for care. Evaluation takes resources and without those resources it is irresponsible to undertake an unproven innovation. In 1997, funding for GRECCs stopped coming from VA Central Office and became the responsibility of each hosting Network. To facilitate VISNs' appreciation for the responsibility they have for supporting GRECCs' clinical roles, in 2007 each GRECC and its hosting VISN were required to develop a Memorandum Of Understanding early in the fiscal year, clarifying the expectations each had of the other. This is the first year that this procedure has been tried, but it seems that some programs have been successful in partnering for a worthwhile, mutually agreeable outcome.

Keep watching—the hope is that this latest phase will make the intended purpose of the GRECC Clinical Mission clearer to all involved—and more beneficial for frail, older veterans than ever before.

Stay Tuned!
Ken Shay, DDS, MS

Erratum:

In a previous issue, our report on cognitive screening implied that the SLUMS exam is a VA standard for cognitive screening. This measure is only one among several examples of standardized tools that are acceptable for use at this time. Our apologies for any unintended confusion.

GRECC Audio-Conference Education Series

EES, GRECC, and the GEC are pleased to announce the continuation of the collaborative audio-conference series. Each lecture will be accessible by dial-in from any location (1-800-767-1750; access code 89095) and will confer one hour of CE credit for physicians, nurses, social workers, and psychologists. The lecture will also be rebroadcast on the following day at 11:00 AM. Please refer to the EES website (vaww.ees.aac.va.gov for VA employees, otherwise go to www.ees-learning.net) for details, access instructions, handouts, and more information.

Upcoming Audio-Conferences:

E-learning in Geriatrics
August 30, 3 pm EST

Incontinence in the Nursing Home: Management Strategies
September 27, 3 pm EST

Diabetes Management in Older Patients
October 25, 3 pm EST

Medication Errors in Nursing Home Patients
November 29, 3 pm EST

Upcoming Conferences

The 5th Annual Rocky Mountain Geriatric Conference
September 7-9, 2007. Keystone, CO. For registration, please visit www.uchsc.edu/cme.

The Gerontological Society of America: 60th Annual Scientific Meeting
November 16-20, 2007. San Francisco, CA. Please visit <http://www.agingconference.com> for meeting information.

Miami GRECC's Publication Excellence



Dr. Stuti Dang

Dr. Stuti Dang, Miami GRECC Investigator, is clinical champion and principal investigator of the "T-Care" program, a care-coordination model blended with technology for an older, chronically ill veteran population with congestive heart failure, diabetes, or chronic obstructive pulmonary disease. Her recent article, "Differential Resource Utilization Benefits with Internet-Based Care Coordination in Elderly Veterans with Chronic Diseases Associated with High Resource Utilization," in *Telemedicine and e-Health Journal* 12(1):14-23, was voted best paper of 2006 by the journals' editorial board. Dr. Dang will be presented with an award at the upcoming American Telemedicine Association annual meeting in Nashville in May 2007.

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VAPSHCS GRECC
1660 S. Columbian Way Seattle WA, 98108
Phone: 206-764-2308 Fax: 206-764-2569
Email: chris.foster@med.va.gov

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