

VA Research Currents

RESEARCH NEWS FROM THE U.S. DEPT. OF VETERANS AFFAIRS



On the road to housing—Juanita Chapman, who served in the Army in the 1970s, works with Bobby Nichols of the Greater Los Angeles VA Healthcare System on an application for VA Supportive Housing.

Tackling homelessness, with a focus on women Veterans

Researchers in Los Angeles are probing the reasons for homelessness among women Veterans—and seeking keys to prevention

Like all researchers, Donna Washington, MD, MPH, is most impressed by robust data and strong evidence. But every now and then she comes across a simple anecdote that speaks volumes about her subject matter—like this story she heard recently from one of her patients at the Greater Los Angeles VA Healthcare System:

“I have a patient who’s chronically homeless,” relates Washington. “At one point, she found out about a transitional housing program, but for some reason she wasn’t eligible. She told a friend about it—another woman Veteran who was homeless. The friend was able to get into the program. She then lent her car to my patient so that my patient could live in it and wouldn’t have to stay on the street.”

see **HOMELESSNESS** on page 2

Study: Financial health critical in reintegration

A study by researchers from VA, the National Institutes of Health, and the U.S. Department of Education has found a strong link between financial well-being and the ability of new Veterans to reintegrate after deployment. The study’s results appeared in June in *Military Medicine*.

The researchers, led by forensic psychologist Eric Elbogen, PhD, of the Durham VA Medical Center and Duke University, looked at 1,388 Iraq and Afghanistan Veterans who completed a national survey on postdeployment adjustment. The results

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Sweet homecoming—U.S. Navy Lt. Cmdr. Richard Langton meets his baby daughter for the first time upon returning to Camp Pendleton in 2011 after a deployment to Afghanistan.

HOMELESSNESS *(from page 1)*

Washington, who studies women’s health and in recent years has keyed in on the issue of homelessness, says the story is a prime example of how Veterans lean on each other for support, especially when they are facing homelessness. “It shows how people share resources and knowledge, how they look for support among each other and try to make it all work. The peer support that women Veterans give each other is tremendous. It’s a resounding theme in the work we’ve done.”

Washington didn’t set out to study homelessness. But her work as a physician caring for women Veterans and her studies on women’s health have led her in that direction. Based in Los Angeles, which has one of the nation’s largest concentrations of homeless people, she has seen hundreds of patients struggling with homelessness—or at risk for being on the street.

Women Veterans are up to four times more likely than civilian women to experience homelessness. Washington’s research group—including Alison Hamilton, PhD, MPH, who led the analysis of focus groups of nearly 30 homeless women Veterans—has worked to understand the



Homing in on homelessness—Drs. Donna Washington (seated) and Alison Hamilton, based at the Greater Los Angeles VA Healthcare System, have been studying homelessness among women Veterans. Most recently, they conducted focus groups that helped shed light on the factors that drive women Veterans into homelessness and the barriers they sometimes face in accessing appropriate services.

reasons. “We are teasing out what the pathways are in and out of homelessness,” says Washington, “and what the relationships are among the various risk factors.”

The work is helping VA shape programs and services to keep women Veterans healthy and housed. *VA Research Currents* spoke with Washington about what her team has learned so far.

RC: Is homelessness first and foremost a result of high rents and low incomes?

DW: That’s true, but it doesn’t tell the whole story. High rent and low income might be the final common point along the pathway, but there are very different ways people get to that point in time. And it’s changed over time.

If you go back a few years, when the economy was somewhat better, substance abuse and mental health issues were very strong and very common risk factors that started people on the path to homelessness. As the economy has worsened, we’re seeing more people who may not necessarily have a substance use disorder or mental health issue. They’re just unemployed, and the combination of unemployment and high rent leads to a lack of opportunity, and in many cases homelessness.

In fact, in our recent research, we saw that unemployment was absolutely the biggest single risk factor for homelessness among women Veterans. So you really need to address housing and employment to help these Veterans. But once you’ve done that, you also need to address other risk factors

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that may continue to make these Veterans vulnerable to homelessness.

Why do substance abuse and mental health problems often result in homelessness?

What both conditions have in common is that they are often associated with a lack of social support. People with substance use disorders may become disenfranchised from their family and friends because of their substance abuse and related behaviors. In the same way, people with serious mental illness may become disconnected from society and their social support. They just don't have the family and friends to fall back on. And of course, these conditions are also risk factors for unemployment.

Does it sometimes happen the other way around—that a person develops mental health problems only after being on the street?

Being homeless is a major stressor, and it puts you at risk for trauma. It can lead to posttraumatic stress disorder, which itself is a risk factor for homelessness. So the cycle is perpetuated, and you find yourself asking which came first, the mental illness or the

homelessness. Sometimes the pathway is not as clear as what I initially described.

For women, how big a risk factor is military sexual trauma?

Military sexual trauma occurs in both men and women, but women are far more likely to experience it. We looked at whether military sexual trauma, or sexual trauma in general, is a risk factor for homelessness, and we found it indeed is. In our case-control study comparing homeless and housed women, we found that once you controlled for other differences between the two groups, experiencing sexual trauma during military service made the women four times more likely to become homeless. Even if it's not the greatest risk factor, it does differ between women Veterans and non-Veterans. So it can help explain the relatively high rates of homelessness among women Veterans compared with non-Veteran women.

If a woman Veteran becomes homeless many years after her service, does that suggest that the military experience itself has little to do with the situation?

We did focus groups to understand this

dynamic. We often heard about delayed effects of military service. One Veteran, for example, talked about being assaulted in the military, but her PTSD symptoms related to that didn't emerge until much later.

Also, it's important to note that if people have PTSD that goes untreated, they're certainly at risk for delayed recurrences of their symptoms throughout their lifetime. And that can make it difficult for them to stay employed, which can ultimately lead to homelessness.

Part of your research involves screening women who come to VA for care. Tell us about that.

With funding from the Women Veterans Strategic Healthcare Group and the Quality Enhancement Research Initiative, we've been testing a tool, or brief questionnaire, to be used in screening patients for vulnerability for homelessness. It's not specific to women, but it includes risk factors that are much more common or important in women than in men, such as military sexual trauma.

Read more of this interview at www.research.va.gov/currents.



Veterans and homelessness

- On a single night in January 2011, 67,495 homeless Veterans spent the night on the streets of America.
- An estimated 144,842 Veterans spent at least one night in an emergency shelter or transitional housing program in one recent year.
- Many other Veterans are considered at risk of homelessness because of poverty, lack of support from family and friends, substance use or mental health issues, and precarious living conditions.
- VA provides substantial hands-on assistance directly to Veterans who are homeless or at risk of homelessness. VA's major homeless programs constitute the largest integrated network of homeless assistance programs in the country.

Source: www.va.gov/homeless



Photo by Shawn Greener

Seeking shelter—This Veteran found temporary living space in an abandoned school bus near a park in Freeborn County, Minn. Image used with permission of the Greater Minnesota Housing Fund, "Portraits of Home: Veterans in Search of Shelter."

Study shows long-term benefit from Parkinson's therapy

Patients with Parkinson's disease who undergo deep brain stimulation (DBS)—a treatment in which a pacemaker-like device sends pulses to electrodes implanted in the brain—can expect stable improvement in muscle symptoms for at least three years, according to a VA study published online June 20 in the journal *Neurology*. The trial is among the longest-term studies on the topic to date.

VA cares for at least 60,000 Veterans with Parkinson's disease, and it's estimated that around two percent—some 1,200—have undergone DBS, either at VA or non-VA facilities, according to lead study author Fran Weaver, PhD, of the Hines (Ill.) VA Medical Center and Loyola University.

The trial was done at several VA and university medical centers and supported by VA's Cooperative Studies Program and the National Institute of Neurological Disorders and Stroke, part of the National Institutes of Health. The maker of the devices used in DBS, Medtronic Neurological, helped fund the research but did not play a role in designing the study or analyzing the results.

In DBS, surgeons place electrodes in the brain and run thin wires under the skin to a pacemaker-like device implanted near the collarbone. Electrical pulses from the battery-operated device jam the brain signals that cause muscle-related symptoms.

Thousands of Americans have seen successful results from the procedure since it was first introduced in the late 1990s. But questions have remained about which stimulation site in the brain yields better outcomes, and over how many years the gains persist.

New report adds to earlier findings

Initial results from the VA study appeared in 2009 in the *Journal of the American Medical Association*. Based on the six-month outcomes of 255 patients, the researchers concluded that DBS is riskier than carefully managed drug therapy—because of the possibility of surgery complications—but may hold significant benefits for those with Parkinson's who no longer respond well to medication alone. A follow-up report in the *New England Journal of Medicine* in 2010, based on two years of follow-up, showed that similar results could be obtained from either of the two brain sites targeted in DBS.

The latest report is based on three years of follow-up on 159 patients from the original group. It extends the previous findings:

DBS Man—
This illustration from Medtronic shows the placement of the electrodes and stimulator in a deep brain stimulation system.

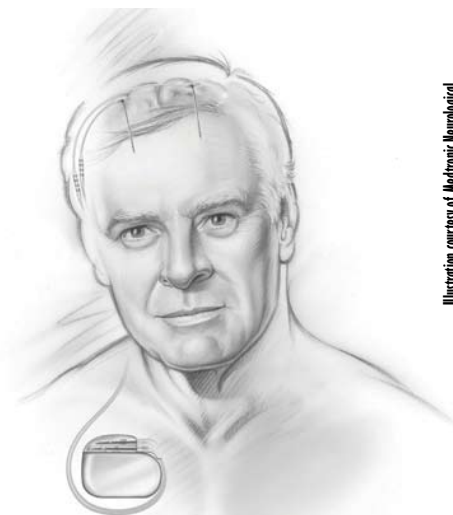


Illustration courtesy of Medtronic Neurological

DBS produced marked improvements in motor (movement-related) function. The gains lasted over three years and did not differ by brain site.

Patients, on average, gained four to five hours a day free of troubling motor symptoms such as shaking, slowed movement, or stiffness. The effects were greatest at six months and leveled off slightly by three years.

The extra year of follow-up, however, revealed declines in other areas that had not been seen in the earlier analyses. “Some early gains in quality of life and activities of daily living are gradually lost, and decline in neurocognitive function is seen over serial evaluations,” wrote the authors. The researchers said the losses most likely reflect the natural progression of the disease, and possibly the worsening or emergence of some symptoms that resist DBS and drugs.

Slight differences seen between two target sites in brain

Earlier research on the treatment had suggested better muscle control could be achieved by targeting the subthalamic nucleus (STN) rather than the globus pallidus interna (GPI)—two areas of the brain involved in movement. On the other hand, GPI stimulation was seen as posing less risk of side effects such as depression or impaired thinking.

On the whole, the VA-NIH trial has found both brain sites roughly equal for outcomes relating to movement. The investigators

Marine on the mend—Deep brain stimulation patient Richard Hutton, who developed Parkinson's disease after a brain injury he incurred while serving with the Marines in Iraq, gets a check-up from Dr. Meredith Spindler of the Parkinson's Disease Research, Education and Clinical Center at the Philadelphia VA Medical Center.



say the results may reflect the benefits of newer surgical techniques and care practices that were not in place when earlier studies of DBS were conducted in the early 2000s.

The latest analysis did find some cognitive declines in the STN group, whereas the GPi group actually improved somewhat, consistent with past findings.

For now, says Weaver, “Providers and patients should consider both motor and non-motor symptoms when choosing a surgical target for DBS.” For example, a patient who is already showing signs of cognitive slowing may be a better candidate for GPi stimulation.

The researchers plan to continue following the patients in the study for several more years. Weaver points out that a patient who is benefiting from DBS should be able to stay with the therapy his entire lifetime, and researchers want to better define the long-term benefits and risks. —

Former Marine finds benefits from treatment

It was one of the worst sandstorms Iraqis had seen in 25 years, recalls retired Marine Richard Hutton. With raging winds of up to 80 miles an hour and visibility limited to only a few feet, the April 2003 tempest had stopped all traffic on the road to Baghdad. Hutton, then a Marine gunnery sergeant assigned to the Army's 7th Engineer Battalion, climbed up on top of a large supply vehicle and tried to secure the 50-caliber machine gun mounted on top of the cab. A door swung open violently and knocked Hutton several feet to the ground.

Hutton tried to forge ahead with his mission over the days ahead—it wasn't clear if he had suffered a concussion—but within a couple of months, troubling symptoms started to appear on his left side: stiffness in his hand, inability to pick up his foot, a twitch in his eye. Eventually, the longtime Marine Reservist was evaluated at Bethesda Naval Medical Center and determined to have Parkinson's disease. The doctors said it was triggered by the head injury he had sustained in the sandstorm.

The diagnosis came back in 2004. Five years later, when Hutton had just turned 50, he underwent surgery to implant two electrodes in his brain to help control the Parkinson's disease.

Hutton, a patient at the Philadelphia VA Medical Center, says the deep brain stimulation treatment has helped “drastically” to beat back the symptoms. “Walking, dexterity—it was a tremendous improvement.” He's still on medication, but not as much. There are still challenges to face from the Parkinson's, but the relief—especially of the motor symptoms—has been welcome. “The stimulator doesn't give me 100-percent relief, but it gives me better than 50 percent,” says Hutton. “I may not be up to going to a job every day, but I'm able to move around on my own.”

Telephone therapy brings more Veterans into treatment—A brief therapeutic technique called motivational interviewing, administered over the telephone, was more effective than simple check-in calls in getting Iraq and Afghanistan Veterans with mental health diagnoses to begin treatment for their conditions, according to a pilot study at the San Francisco VA Medical Center and the University of California, San Francisco. Participants receiving telephone motivational interviewing also were significantly more likely to stay in therapy, and reported reductions in marijuana use and a decreased sense of stigma associated with mental health treatment. Lead author Karen Seal, MD, MPH, director of the Integrated Care Clinic at the San Francisco VA and an associate professor in residence of medicine and psychiatry at UCSF, says motivational interviewing is a proven, relatively low-cost method in which counselors encourage clients to explore and talk about discrepancies between their core values and their actual behaviors. “Articulating to the counselor how they want to change can motivate them to make actual behavioral changes, such as engaging in treatment,” says Seal. (*General Hospital Psychiatry*, May 25, 2012)

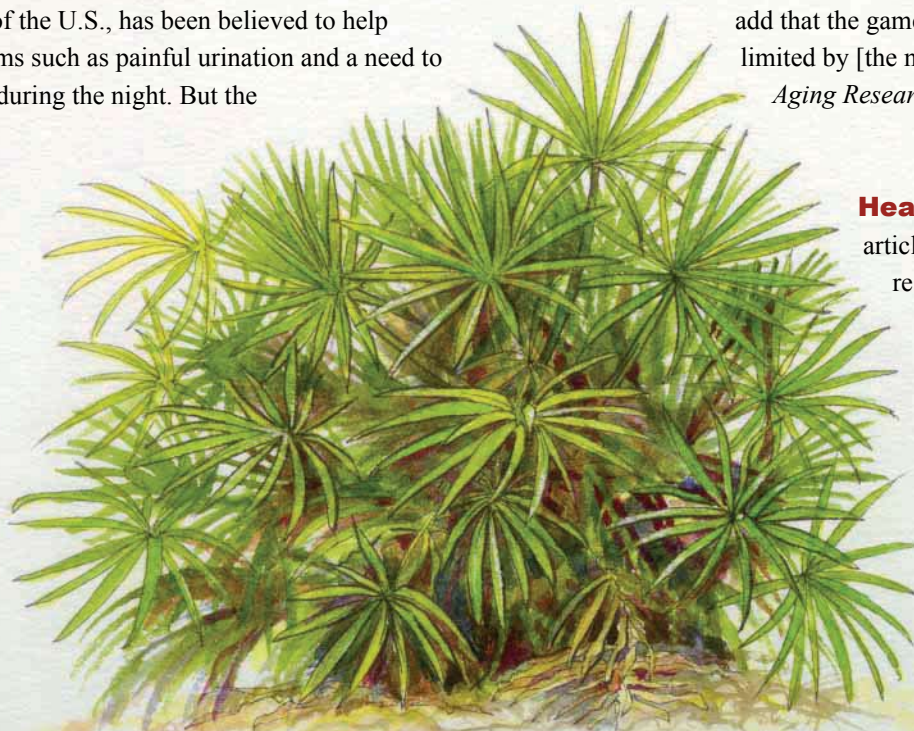


Popular herb for prostate problems may be ineffective—*Serenoa repens*, also known as saw palmetto, has “caught on in the U.S. as a treatment for enlarged prostate,” or benign prostate hyperplasia, according to *WebMD*. The herb, which has pointy palm-like leaves and grows in the Southeast region of the U.S., has been believed to help symptoms such as painful urination and a need to urinate during the night. But the

treatment may not be effective at all, according to a recent review by the Center for Chronic Disease Outcomes Research, based at the Minneapolis VA Medical Center. The study analyzed results from 17 randomized trials. The authors, led by Timothy Wilt, MD, MPH, concluded that the herb “does not improve [lower urinary tract symptoms] or [maximum urinary flow rate] compared with placebo in men with BPH, even at double and triple the usual dose.” At the same time, they concluded that the herb’s adverse side effects are “generally mild and comparable to placebo.” (*British Journal of Urology International*, June 2012)



Wii-Fit helps improve balance, gait for assisted living residents—A small study led by a group with the Geriatric Research, Education and Clinical Center at the Little Rock (Ark.) VA Medical Center found that assisted living residents with mild Alzheimer’s disease benefited from using the Wii-Fit. The interactive Nintendo video game has users stand on a special balance board as they engage in yoga, strength training, or balance games. A virtual trainer talks them through the activities while tracking their progress and giving them visual and auditory feedback. In the study, 22 older men and women were assigned to either the Wii-Fit or a walking program, 30 minutes a day, five days a week, for eight weeks. Participants in both groups, including those at high risk for falls, showed improved gait and balance. The authors say the Wii-Fit may have extra advantages in that it is designed to be socially engaging and entertaining. They add that the game is “enjoyable, easily accessible, and is not limited by [the need for] a safe place to walk.” (*Journal of Aging Research*, 2012)



Saw palmetto.


Heart hormones fight cancer—In a new article in *Anticancer Research*, physician-researcher Dr. David Vesely of the Tampa VA Medical Center summarizes the promising results from lab studies on four cardiac hormones—chemicals naturally produced by the human heart—that appear to kill cancer cells. According to Vesely, the hormones kill up to 97 percent of various cancer cells—such as pancreatic, breast, and colon—within 24 hours in cell cultures. The substances also appear to inhibit various cancer-promoting pathways in animal models. (*Anticancer Research*, July 2012) 

Illustration by Elizabeth Smith, iStock.com

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showed that Veterans with a probable diagnosis of major depressive disorder, posttraumatic stress disorder, or traumatic brain injury were significantly likely to be in financial difficulty. The researchers also found that whether they had a psychiatric diagnosis or not, Veterans who reported having enough money to cover their basic needs were significantly less likely than others to have postdeployment adjustment problems, such as being arrested, becoming homeless, developing problems with substance abuse, or exhibiting suicidal or aggressive behaviors.

In the study, the researchers asked about employment, annual income, and unsecured debt, excluding mortgages and car loans. They also asked whether the Veterans had enough money to make ends meet and cover basic needs such as food, shelter, clothing, transportation, social activities, and medical care.

The study also included questions on whether the participants had written a bad check in the past year, fallen victim to a money scam, had their lights or power shut off, or been referred to a collection agency.

Along with the finance questions, the researchers asked Veterans if they had been arrested, engaged in suicidal behavior or had suicidal thoughts, or been homeless within the past year. Screening tests were used to measure drug and alcohol misuse and episodes of violence.

The researchers also gathered data on age, sex, race, ethnicity, marital status, income, education, branch of service, time since last deployment, and combat exposure.

The team learned that during the past year, 13 percent of study participants lost a job, 15 percent wrote bad checks, 21 percent were referred to collection agencies, 4 percent had been victims of money scams, 5 percent had their utilities or power shut



U.S. Navy Yeoman 1st Class Jorge Ulloa greets his wife, Laidy, during a homecoming ceremony for his ship's crew in 2009. A new study by VA researchers and federal colleagues has described how Veterans' financial status and money-management skills impact their reintegration after deployments.

off, and 10 percent reported an unsecured debt greater than \$40,000.

“We found that Veterans with probable major depressive disorder, PTSD, or TBI were substantially less likely to have money to cover expenses for clothing and social activities than other Veterans,” says Elbogen, “and were more than twice as likely to have been referred to a collection agency. We also found that Veterans who were able to meet their basic needs were less likely to be homeless, be arrested, misuse alcohol and drugs, have suicidal thoughts or behaviors, or report acts of physical aggression—and that Veterans with low incomes and poor money management skills had the most readjustment problems, while those with high income and good management skills had the fewest.”

Interestingly, the study found that Veterans with low incomes but good money-management skills had about the same level of postdeployment adjustment problems as those with high income and poor money management skills. “This emphasizes the

dual importance of income and financial management skills,” says Elbogen.

The study did not resolve whether money problems caused postdeployment adjustment issues, or whether postdeployment issues led to money problems. The authors point out that PTSD could interfere with work attendance and reduce stable employment—and depression, suicidal thoughts, and cognitive trouble can also increase the likelihood of decreased productivity and job performance, and job loss.

“It’s also possible,” notes Elbogen, “that financial strain and postdeployment stress are mutually reinforcing and can create a downward spiral.”

“Given these findings,” concludes Elbogen, “improved money management appears to be important for successful postdeployment adjustment, particularly for Veterans with psychiatric and cognitive disabilities. Efforts aimed at enhancing financial literacy and promoting meaningful employment may have promise to enhance outcomes and improve quality of life among returning Veterans.”

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Latest study is step forward for virtual colonoscopy

Computed tomographic colonography (CTC)—or virtual colonoscopy—administered without laxatives is as accurate as conventional colonoscopy in finding potentially cancerous polyps, according to a study by the San Francisco VA Medical Center, the University of California, San Francisco, and Massachusetts General Hospital.

“The use of laxatives is often viewed as the worse aspect of having not only a virtual colonoscopy but an optical colonoscopy,” says co-author Judy Yee, MD, chief of radiology at the San Francisco VA and vice chair of radiology at UCSF. “I hope this research will encourage patients who have delayed screening for colon cancer to be examined with this less invasive method.”

The study involved 605 patients overall, including Veterans at the San Francisco VA. The two colonoscopy methods used in the study showed about the same effectiveness in finding polyps six millimeters or larger in size, which are more likely than smaller polyps to harbor cancer.

Virtual colonoscopy is approved by the American Cancer Society as a valid

Escaping the scope—Dr.

Judy Yee of the San Francisco VA Medical Center has helped pioneer an imaging method that enables doctors to view the colon and screen for pre-cancerous polyps without conducting an invasive colonoscopy.



screening test for colorectal cancer. It uses a CT scanner to hunt for cancers and polyps in the colon noninvasively. In standard optical colonoscopy, a physician inserts a six-foot-long scope into the entire colon. One plus of this method is that if worrisome polyps are found, they can be removed during the same procedure—something that is not possible with the virtual alternative. Currently, both methods call for patients to take a bowel-cleansing laxative before the procedure.

With laxative-free CTC, patients do not have to go through bowel cleansing before

the exam. Instead, they begin a low-fiber diet two days before the test. They also ingest a tagging agent the day before. The agent mixes with residual material in the colon and can then be identified and removed digitally when radiologists interpret the scans.

Yee notes that further research is needed on the laxative-free procedure before it can be used on a wide scale.

The study results appeared May 15 in the *Annals of Internal Medicine*.