Selected highlights of VA research: Dec. 2021 — Jan. 2022

**Recently published studies**

**Telehealth may be best method to deliver PTSD therapy**—Telehealth therapy is an efficient and effective way to treat PTSD, according to a study by South Texas VA researchers and colleagues. Active-duty service members and Veterans with PTSD underwent 12 sessions of cognitive processing therapy, a psychotherapy. Therapy was delivered one of three ways: face-to-face with the therapist in-office; through a computer video link; or in the patient’s home, with the therapist traveling to the home. All three methods resulted in significant PTSD symptom reductions. In-home and telehealth symptom reductions were about twice as large as those for in-office treatment. In-home treatment had the lowest dropout rate, but the differences were not statistically significant. While in-home treatment led to the strongest PTSD improvements and lowest dropout, it was also the least accepted treatment by patients. In-home treatment also required double the amount of therapist time and had unexpected complications for both patients and therapists. The results provide strong support for the use of telehealth for PTSD treatment, say the researchers. ([BMC Psychiatry](https://bmcpsychiatry.biomedcentral.com/articles/10.1186/s12888-022-03735-3), Jan. 17, 2022)

**Study identifies gene variant that may protect against severe COVID-19**—An international study using VA Million Veteran Program data identified a specific gene variant that may protect against severe COVID-19 infection. The team, including a VA Boston researcher, studied the genome of nearly 3,000 patients of African ancestry with COVID-19 and more than 130,000 controls of African ancestry. They found that individuals with a specific variant on the gene OAS1 had a decreased chance of developing severe COVID-19. Previous studies of people of European ancestry identified the region on the genome containing OAS1 as related to COVID-19 risk. By examining this region in those with African ancestry, the researchers were able both to show that people of different ancestry shared this protection and to home in on the specific gene variant. People with this gene variant produce a longer form of a specific protein, which is more effective at breaking down the virus that causes COVID-19 than other forms of the protein. The finding could help develop new drugs against COVID-19, according to the researchers. The study also shows the importance of including ethnically diverse populations in genetic studies, they say. ([Nature Genetics](https://www.nature.com/articles/s41588-022-00394-7), Jan. 13, 2022)
Possible new biomarker for antidepressant effectiveness—A team including a Jesse Brown VA Medical Center researcher identified a biomarker that may help predict how well patients with depression respond to antidepressants. The researchers studied blood samples of 49 subjects with major depressive disorder and 59 healthy controls. Subjects with depression had significantly lower activity of an enzyme called adenylyl cyclase. The protein Gsα is known to activate adenylyl cyclase. However, in patients with depression this protein is often concentrated inside lipid rafts, structures within cell membranes made of lipid molecules. The researchers compared blood samples of patients with depression after six weeks of antidepressant treatment. They found that those who responded best to antidepressants had higher activation of the enzyme than those who did not respond to treatment. Antidepressants may aid in the movement of Gsα outside of lipid rafts, where they would be more likely to activate adenylyl cyclase, according to the researchers. The results could lead to a simple blood test for these molecules to predict how well antidepressants will work, they say. (Molecular Psychiatry, Jan. 5, 2022)

Group cohesion an important part of suicide prevention group therapy—Establishing group cohesion is an important part of group therapy for Veteran suicide prevention, according to a study by Robley Rex VA Medical Center researchers. They performed a three-year follow-up of Veterans who received group therapy after discharge from inpatient psychiatric care following a suicidal crisis. No suicides occurred during the study period. Higher group cohesion was linked to a lower likelihood of psychiatric hospitalization and higher engagement in mental health services. Group cohesion refers to forming a collaborative, accepting relationship with the therapy group. Factors that led to group cohesion included shared experiences and having similar service backgrounds, as well as building intimacy and trust. The results show that group therapy could be a useful long-term treatment for suicidal behavior, say the researchers. (Psychological Services, Dec. 30, 2021)

Lower risk of death from surgery in VA hospitals than outside facilities—Patients who have surgery at VA facilities had a lower risk of death than those receiving non-VA surgery, found a VA study. Researchers looked at data on nearly 4 million surgeries performed between 2015 and 2018. Surgeries from eight different non-cardiac specialties were examined. Compared with private sector care, VA care was associated with a lower risk of death during surgery and recovery. VA surgeries also had lower failure to rescue, defined as inability to prevent a patient’s deterioration and death after a complication arises. The results suggest that VA hospitals may be better equipped to care for the unique surgery needs of Veterans, say the researchers. Veterans are often more frail and have more medical conditions than the general population. (JAMA Surgery, Dec. 29, 2021)

Women Veterans less likely than men to be prescribed statins—Women are less likely than men to receive statin therapy for cardiovascular care, according to a Ralph H. Johnson VA Medical Center study. Statins, drugs that lower cholesterol, are often prescribed to patients with cardiovascular disease and diabetes. Researchers looked at data on more than 700,000
VA patients with diabetes. They found that women Veterans had 14% lower odds of being prescribed statins, compared with men. Lower access to health care and higher mental health diagnoses seem to explain this disparity. Women were 10% less likely than men to be on high-intensity statins. After the researchers adjusted for health care access and mental health burden, women actually had higher odds of high-intensity statin use. The study highlights a persistent health disparity between men and women Veterans, say the researchers. (Women’s Health Issues, Dec. 20, 2021)

Less racial disparity in VA than non-VA care for bladder cancer—Lower racial disparities in bladder cancer outcomes were seen in VA versus outside care, in a study by VA San Diego researchers. African American patients with bladder cancer tend to have worse outcomes than white patients, likely due to difference in health care access. The study included more than 36,000 VA patients and more than 120,000 non-VA patients with bladder cancer. African Americans were more likely than Whites to have muscle-invasive disease (a more serious form of bladder cancer) and cancer metastasis, when cancer spreads to other parts of the body, in both groups. But this racial difference was smaller in VA patients. In non-VA patients, African Americans were more likely than Whites to die from bladder cancer or other causes. Mortality rates between races were similar in VA patients. The findings show that receiving care in an equal-access system such as VA lowers cancer care disparities, according to the researchers. (Journal of the National Cancer Institute, Dec. 16, 2021)

Phone app may help treat insomnia—A mobile app can help treat insomnia in Veterans, found a VA Bedford study. CBT-i Coach is a smartphone program designed to deliver cognitive behavioral therapy to treat insomnia. Cognitive behavioral therapy is psychological treatment focused on changing patterns of thinking related to stress and trauma. Veterans with chronic insomnia using the app reported significant improvements in sleep quality and insomnia symptoms. Benefits were similar in those with and without PTSD or sleep apnea. Adding a physical activity regimen to the app treatment did not affect outcomes. The results show that app-directed self-management can be a useful tool for Veterans with insomnia. (JMIR Formative Research, Dec. 9, 2021)

Potential new treatment for cocaine use disorder—A team including a Providence VA researcher identified a potential new treatment for cocaine use disorder. Researchers studied gene expression in the brain tissue of people with cocaine use disorder who died from cocaine-related causes. They identified several gene expression patterns associated with the disorder. Ibrutinib, a drug used to treat certain cancers, appears to interact with the biological pathways associated with cocaine use disorder. Using a fruit fly model, the researchers found that ibrutinib reduced cocaine-induced startle response and seizures. The findings suggest that ibrutinib could be a useful treatment for cocaine use disorder, say the researchers. (Translational Psychiatry, Dec. 8, 2021)

Psychotherapy an effective treatment for anger—The psychotherapy cognitive behavioral intervention (CBI) is an effective treatment for anger problems in Veterans, found a VA study.
Problems with anger and aggression are common in post-9/11 Veterans. Researchers compared the effectiveness of CBI versus supportive intervention for anger in 92 Veterans. CBI focuses on recognizing and changing how a patient thinks and reacts to anger and traumatic thoughts. Supportive intervention focuses on support, hope, and motivation. Patients receiving CBI has significantly more improvement in anger severity, social and interpersonal functioning, and quality of life. The treatment was effective regardless of whether the patient had PTSD. The results show that CBI can be an effective treatment for post-deployment anger for patients both with and without PTSD, say the researchers. (Depression and Anxiety, Dec. 8, 2021)

**Ongoing projects**

**VA researcher aims to help survivors of military sexual trauma with PTSD**—VA investigators are examining the effectiveness of a clinical intervention, trauma-sensitive yoga, to help women Veterans who experienced military sexual trauma and went on to develop PTSD. (1/24/22)

**Lab studies seek hormone-based obesity treatment**—Researchers say the findings from a new study could potentially lead to a safe, effective treatment for the problem of obesity, which affects some 4 in 10 Americans. (1/18/22)

**VA clinicians testing new radioactive tracer drug to track prostate cancer in the body**—VA researchers at the Truman VA in Missouri are testing a new radioactive tracer drug for its ability to show whether and where prostate cancer has spread in the body. (1/12/22)

**VA and COVID therapeutics**—Experts from VA’s Office of Research and Development discuss VA’s role in studying drugs and other therapies needed to treat patients with COVID-19. (1/3/22)

**Can medication ease insomnia in Veterans with PTSD?**—A VA study will compare three drugs for their ability to treat Veterans with PTSD who have insomnia, one of the hardest-to-treat symptoms for patients with PTSD. (12/17/22)

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