#### Northern California Institute for Research and Education



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# **Focus on Research**Understanding suicide in older Veterans

As an epidemiologist interested in aging and geriatric psychiatry, Amy Byers, PhD, MPH, analyzes massive data to address clinical questions about late-life mental health.

Her current research—suicide in older Veterans—is a somber and complex topic.

Byers' studies, however, are shining light on potential solutions for internists, geriatricians, mental health specialists, and policy planners engaged in suicide intervention and prevention.

Veterans have a nearly 60% higher rate of suicide than the general population, according to the U.S. Department of Veterans Affairs. While most national suicide prevention programs currently target younger military personnel and Veterans returning from combat, older Veterans experience the highest rates of suicide fatalities.

"The greatest number of lives lost to suicide are in midlife and older Veterans," said Byers, University of California, San Francisco (UCSF) Professor of Psychiatry and Behavioral Sciences and Medicine (Division of Geriatrics), and Research Career Scientist at the San Francisco Veterans Affairs Health Care System (SFVAHCS). "Approximately 70% of Veteran suicide deaths are in Veterans 50 years and older. In addition, Veterans 50 years and older make up the majority (70%) of the Veteran population. Thus, suicide among older Veterans is important on multiple levels for me to study."



Amy L. Byers, PhD, MPH

Professor of Psychiatry and Behavioral Sciences University of California, San Francisco

Professor of Medicine, Division of Geriatrics University of California, San Francisco

Research Career Scientist San Francisco VA Health Care System

Research at Byers' SFVAHCS lab is funded by several agencies, including the National Institutes of Health (NIH), the Department of Defense (DOD), and the Department of Veterans Affairs (VA). She is the Principal Investigator of the first VA grant longitudinally investigating suicide and suicidal behavior at a national level in older U.S. Veterans.

One NIH-funded study focuses on suicide and suiciderelated outcomes among older Veterans and individuals re-entering the community from incarceration. Byers' VA-funded work, a "Genius Award" from UCSF's Older Americans Independence Center, also supported investigating the link between suicide risk and specific medications.

In 2021, Byers was named a Research Career Scientist by the U.S. Department of Veterans Affairs Office of Research and Development. The award provides multiyear funding in support of her team's research studies.

She has built large epidemiologic datasets from the VA, Centers for Medicare and Medicaid Services, and national suicide attempt and death data. To date, Byers has access to data on five million Veterans and 14,000 Veteran suicide deaths.

Yet Byers' research is not just about data and numbers. It is also about her passion for aging population research and her quest to answer intriguing questions. "The thing that fascinates me about aging work is that there is so much to study, discover, and learn," she said. "It is the ultimate intersection of physical and mental health over the lifespan."

"Add suicide research to this already deep interest of mine, and I become even more deeply intrigued," said Byers. "So many questions come up for me that I want answers to when thinking about a midlife to older adult, a Veteran, attempting suicide."

"Death is the great unknown; usually feared and avoided. And humans want to survive—don't they? What leaves someone wanting to go there? With older adults, I think that question is complicated and profound, and, thus, my interest grows."

#### Having an impact

Byers also believes that after the numbers are crunched and research is published, she should be active in "getting out the story," not just to health providers, but also to the general public, especially family members and caregivers of vulnerable older people who may be able to recognize warning signals of suicide.

Byers' studies are making an impact. A 2021 study, published in *JAMA Psychiatry*, revealed how devastating a diagnosis of cognitive decline can be on suicide risk. In the study that looked at five databases on nearly 148,000 VA patients averaging 74 years of age, Byers and her research team found that the risk of suicide attempt was 73% higher in those recently diagnosed

with mild cognitive impairment (MCI) and 44% higher in those newly diagnosed with dementia compared with patients without the diagnoses.

In contrast, people with a longstanding diagnosis of MCI or dementia had no such increase in suicide risk.

"The potential explanation for these findings is that patients with a recent diagnosis of MCI or dementia may have preserved insight into what such a diagnosis entails, anticipating a progressive cognitive and functional decline, fearing loss of autonomy, and worrying that they become a burden to significant others," said Byers.

"In addition, the decline in functioning with the progression of dementia may reduce the ability of patients to plan and implement a suicide attempt at later stages of dementia than at the earlier stages, and, thus, reduce risk of the lethality of the attempt," she said.

"The study received significant media coverage in more than 30 news outlets around the country," Byers said. The message was clear to patients and their loved ones: After a diagnosis, watch for signs of depression, social withdrawal, increased sadness, and even suicidal thoughts.

The findings also highlighted the need for early detection, treatment, and supportive services for people with MCI or dementia.

#### **Informing clinicians**

Byers' research also aims to educate clinicians and guide best practices. A 2019 study identified comorbidity profiles of more than 2,100 older patients (65 and over) who were last seen in primary care before a suicide attempt. So much more than a depression diagnosis contributes to suicide risk, the study found.

The five profiles were: Minimal Comorbidity (23.2%); Chronic Pain-Osteoarthritis (30.1%); Depression-Chronic Pain (22.9%); Depression-Medical Comorbidity (16.5%); and High Comorbidity (7.3%).

"I think this work reveals the limitations of examining older Veterans at risk of suicide as an average one-size-fits-all typology," she said. "There is significant heterogeneity and I think we have a lot more work to do here to understand who is truly at risk of attempting and dying by suicide in mid- to late-life."

"My recent VA Merit Award will further deepen understanding of such heterogeneity by identifying specific typologies," said Byers. "This work will inform how best to target the multidisciplinary needs of older Veterans, which in turn will inform how best to mitigate and prevent suicide."

The study, published in the Journal of the American Geriatrics Society, also found that overall, 61% of the attempted suicides were fatal, and 83% of suicide decedents used firearms. The findings suggest that conversations about firearm safety by medical providers may play an important role in suicide intervention and prevention.

"I hope that my work will influence national policy at the VA and beyond on best practices and clinical guidelines to effectively support mid- to late-life adults/ Veterans at some of the most profound transitions in their life, and that there is better understanding and acknowledgment about what those vulnerable points of transition are," said Byers.

"I also want to see my work become more personcentered," she said. "Behind every suicide is a person with a story and behind every clinician is a person wanting to help. I think often both feel paralyzed by the system, healthcare and society. I want to figure out how best to use the large-scale data work I do to more personalize my research and support both the patient and the clinician."

If you are a Veteran in crisis or concerned about one, connect with our caring, qualified Veterans Crisis Line responders for confidential help. Many of them are Veterans themselves. This service is private, free, and available 24/7. You are not alone:

Call 988 and select 1.

Text 838255.

If you have hearing loss, call TTY: 800-799-4889.

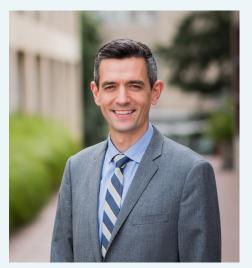
# Q and A: An Interview with Dr. Warren Gasper

Q: Please tell us about your research and why you decided to pursue this research.

A: My research focuses on the body's adaptation to arteries affected by cardiovascular disease (the disease of atherosclerosis) and on the effect of surgical procedures to restore blood flow to the brain. organs, and limbs.

My research uses novel imaging techniques—such highresolution ultrasound to study vasoreactivity and high-resolution Associate Professor of Surgery, Division MRI—to evaluate arteries before and after treatments. I am also interested in developing new devices for treating vascular disease as well as new pharmacologic approaches. In addition, I am a site multi-center clinical trials in vascular disease, including BEST-CLI, CREST-2 and the TOP trial.

I was drawn to vascular surgery



Warren Gasper, MD

of Vascular and Endovascular Surgery University of California, San Francisco

Associate Program Director, Vascular Surgery Integrated Residency Program University of California, San Francisco

Chief, Vascular Surgery Section Principal Investigator for several San Francisco VA Health Care System

> Director, Vascular Integrated Physiology and Experimental Therapeutics (ViperX) San Francisco VA Health Care System

> > NCIRE Board Member

by a desire to help patients with vascular atherosclerosis maintain their daily functional activities and avoid serious events like stroke, aneurysm rupture, and amputation. Understanding how arteries change and how patients' physiology adapts to vascular atherosclerosis will improve the treatments we do and move vascular surgery toward patient-specific treatments that are most likely to provide a benefit.

Q: How will this research benefit Veterans who suffer higher rates of vascular disease than the general population?

A: Clinically, I treat older patients with advanced cardiovascular disease, yet aging does not have to be synonymous with loss of function or independence. My research is driven by a desire to improve the effectiveness and durability of vascular surgery treatments, so Veterans and the general population maintain their

functional ability and avoid major life-threatening events like strokes, aneurysm ruptures, or limb-threatening events like amputations. Participating in major clinical trials ensures that Veterans are represented in those study results.

Q: Please tell us about the Vascular Integrated Physiology and Experimental Therapeutics (ViperX) Lab and why the research done there is ideally located at the San Francisco Veterans Affairs Health Care System (SFVAHCS).

A: Our lab focuses on novel imaging-based studies of vascular disease. We have developed protocols for performing ultrasound-based flow-mediated vasodilation studies to characterize the vasoreactivity of the brachial artery in the arm to changes in blood flow.

The blood flow to our tissues is regulated by supply and demand. For example, when we exercise, the muscles in the leg increase the flow of blood. Normally, the arteries supplying the muscles respond to the increased flow by dilating, making the blood flow pipeline bigger to deliver more blood.

We have found that Veterans with vascular atherosclerosis have

impaired vasoreactivity, meaning they do not respond as effectively to changes in flow to provide more blood. We have investigated interventions to improve vasoreactivity including exercise or dietary supplementation with omega-3 fatty acids.

The SFVAHCS provides an enriched research environment with numerous collaborators looking to take research in new directions and importantly, we have Veterans who are willing to participate in our studies to help make our care better.

Q: Successful research relies on collaboration with many others. Who are the key collaborators with your lab?

A: At the SFVAHCS and NCIRE, we have collaborated frequently with Dr. David Saloner in radiology for advanced MRI-based vascular imaging. We have also collaborated with Dr. Mary Whooley in cardiology and Dr. Ruth Dubin in nephrology. One recent project was a study with Dr. Thomas Neylan in mental health to look at vasoreactivity in Veterans with PTSD. NCIRE has been instrumental in suggesting and promoting these collaborations and has been instrumental in our

role as a site for industry and multicenter clinical trials.

Q: Looking to the future, what would be considered successful results of your research?

A: In the short term, the goal is to develop better patientcentered treatment algorithms to provide a durable benefit with the lowest perioperative risk. In the long term, the goal is to develop novel treatments that would stop or reverse the progression of atherosclerosis. For example, we will soon be a site for a clinical trial investigating a novel agent to arrest the growth of small abdominal aortic aneurysms which would prevent aneurysm rupture and avoid the need for surgery to prevent the aneurysm rupture.

# Q: What would most people be surprised to know about you?

A: It's probably not surprising that a vascular surgeon runs for fitness. What people may not realize is that I have completed 17 marathons, including the Boston marathon twice. My favorite was Grandma's Marathon in Duluth, MN, which ends at the historic Grandma's Saloon & Grill.

#### More on ViperX

Thanks to the hardwork and dedication of Dr. Gasper and his research team, the ViperX lab has made the following research accomplishments:

- Demonstrated adventitial infusion into the lower extremity
- Implemented infusion of Dexamethasone to prevent restenosis
- Tested an infusion of PRT-201 to enhance remodeling
- Developed a protocol to measure endothelial function in vein grafts
- Described the temporal model of vein graft adaptation in the lower extremity
- Demonstrated omega 3 fatty acids improve proresolution markers

Fore more information on ViperX Lab research and collaborations visit <a href="https://viperxresearchlab.ucsf.edu/">https://viperxresearchlab.ucsf.edu/</a>

# **Principal Investigator and Research Highlights**

NCIRE is proud to announce the following achievements of our supported Principal Investigators:

**Dr. Julian Cobert** named 2024 SCCM-WEIL Research Grant Recipient by the Society of Critical Care Medicine for his project titled: "Racialization of ICU Notes and Debiasing Strategies to Lead to Fairer ICU Mortality Prediction".

Read more: https://www.sccm.org/Research/Grants/SCCM-Weil-Research-Grant-Recipients

NCIRE Board Member **Dr. Kristine Yaffe** ranked in the top 50 of female scientists in the U.S. for 2023 by Research.com.

Read more: <a href="https://research.com/scientists-rankings/best-female-scientists/us">https://research.com/scientists-rankings/best-female-scientists/us</a>

Congratulations to **Dr. Rebecca Sudore** for receiving the UCSF Spring 2024 Academic Senate Distinction In Mentoring Award for faculty at the rank of Full Professor!

Read more: <a href="https://calendar.ucsf.edu/event/academic senates 2024 distinguished faculty awards ceremony#:~:text=their%20mentoring%20achievements.-,The%20Spring%202024%20recipient%20of%20the%20Academic%20Senate%20Distinction%20In,the%20UCSF%20School%20of%20Medicine.">https://calendar.ucsf.edu/event/academic senates 2024 distinguished faculty awards ceremony#:~:text=their%20mentoring%20achievements.-,The%20Spring%202024%20recipient%20of%20the%20Academic%20Senate%20Distinction%20In,the%20UCSF%20School%20of%20Medicine.</a>

**Dr. Sei Lee** has been appointed to a 4-year term (2024-27) to serve on the U.S. Preventive Services Task Force (USPSTF). He will help the USPSTF make evidence-based recommendations about preventive services to improve the health of all Americans.

Learn more about the USPSTF here: <a href="https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/task-force-resources">https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/task-force-resources</a>

NCIRE Board Member **Dr. Bruce Ovbiagele**, was chosen by the American Brain Foundation (ABF) to receive its annual Scientific Breakthrough Award.

 $Read\ more: \ \underline{https://www.newswise.com/articles/ucsf-neurologist-to-receive-prestigious-scientific-award2/?ad-\underline{2f=1\&aid=806828}$ 

GeriPal podcast, hosted by **Dr. Alexander Smith** and his colleague Dr. Eric Widera, now allows listeners to claim Continuing Medical Education (CME) credit for listening to the podcast that focuses on all things geriatrics, hospice, and palliative care. A \$100 annual subscription gives listeners access to a year's worth of CME podcasts. Learn more: <a href="https://geripal.org/cme">https://geripal.org/cme</a>

Exciting new developments for research conducted by NCIRE Board Chair Dr. Michael Shlipak:

"UCSF/SFVAHCS research collaboration reveals lack of albuminuria testing and describes treatment approaches in the real-world setting for patients with type 2 diabetes and chronic kidney disease".

Read more: <a href="https://khrc.ucsf.edu/news/ucsfsfvahcs-research-collaboration-reveals-lack-albuminuria-test-ing-and-describes-treatment">https://khrc.ucsf.edu/news/ucsfsfvahcs-research-collaboration-reveals-lack-albuminuria-test-ing-and-describes-treatment</a>

#### NCIRE wants to celebrate your research!

We encourage Principal Investigators and Research Teams to contact NCIRE Executive Assistant Tai Arceneaux at <a href="maintese.Arceneaux@ncire.org">Tainese.Arceneaux@ncire.org</a> with website links, stories, etc. about your research so that we may celebrate your work with our readers.

#### **New Federal Funding Awards**

#### Congratulations to the following Principal Investigators for your recently funded awards!

Sei Lee, MAS, MD

Project Title: Academic Senate Pilot for Anti-Racism

Research Award

Sponsor: RAP via subaward from UCSF

Activation Date: 2/26/2024

Michael Shlipak, MD, MPH

Project Title: Physical Function in Chronic Kidney Disease: Characterizing the Natural History and

Relationship to Clinical Outcomes

Sponsor: NIH via subaward from University of

Pennsylvania

Activation Date: 2/23/2024

Michael Shlipak, MD, MPH

Project Title: Environmental Metal Toxicity and Kidney

Tubule Measures in Diverse Populations

Sponsor: NIH

Activation Date: 2/20/2024

Julien Cobert, MD

Project Title: Racialization of ICU Notes and Debiasing Strategies to Lead to Fairer ICU Mortality Prediction

Sponsor: Society of Critical Care Medicine (SCCM)

Activation Date: 2/1/2024

Aoife O'Donovan, PhD

Project Title: Inflammatory Challenge and Fear Extinction: A Model to Enhance Understanding of Posttraumatic Stress

Disorder Sponsor: NIH

Activation Date: 2/1/2024

Karen Seal, MD

Project Title: Implementation of a Pragmatic Trial of Whole Health Team vs. Primary Care Group Education to Promote Non-Pharmacological Strategies to Improve Pain, Functioning

and Quality of Life in Veterans (Supplement)

Sponsor: NIH

Activation Date: 1/4/2024

Jorge Kizer, MD

Project Title: Multi-omic Signatures of Gut Dysbiosis and Cardiovascular Comorbidities Associated with HIV Infection Sponsor: NIH via subaward from Albert Einstein College of

Medicine

Activation Date: 1/4/2024

## **Funding Opportunities**

#### **Industry Opportunities**

Please contact Newton Ong, <u>newton.ong@ncire.org</u>, or Adan Pinedo, <u>adan.pinedo@ncire.org</u>, for further information on the following Industry Opportunities.

**Regeneron Pharmaceuticals** 

A Phase 3 Randomized Study of Intralesional Cemiplimab Versus Primary Surgery in Patients with Early Stage Cutaneous Squamous Cell Carcinoma (CSCC).

AbbVie

Cemiplimab

Phase 3, Multicenter, Randomized, Open Label Study of ABBV-383 vs Standard Available Therapies in Subjects with Relapsed or Refractory Multiple Myeloma.

Please visit the Office of Sponsored Research page on the NCIRE SharePoint at <a href="https://ncire.sharepoint.com/">https://ncire.sharepoint.com/</a> or click <a href="https://ncire.sharepoint.com/">here</a> for the full list of Industry Opportunities.

#### **Federal Funding Opportunities**

Please contact Jessica Schmidt, <u>jessica.schmidt@ncire.org</u>, for further information on the following Federal Funding Opportunities.

**NIH:** <u>NIAID and NIDDK Research Opportunities for New and "At-Risk" Investigators to Promote Workforce Diversity (R01 Clinical Trial Optional)</u> (PAR-23-275)

The purpose of this notice of funding opportunity (NOFO) is to encourage researchers from diverse backgrounds to work with their institutions to submit applications for research projects within the mission of either NIAID or NIDDK. This NOFO seeks to support either (a) a New Investigator (NI), who has not

## **Funding Opportunities continued**

previously competed successfully for substantial, independent funding from NIH, or (b) an 'At-Risk' investigator, who had prior support as a PD/PI on a substantial independent research award and unless successful in securing a substantial research grant award in the current fiscal year, will have no substantial research grant funding in the following fiscal year. Application Deadlines: June 5, 2024; October 5, 2024; February 5, 2025; June 5, 2025.

NIH: NIH Pathway to Independence Award (Parent K99/R00 Independent Clinical Trial Not Allowed) (PA-20-188)

The purpose of the NIH Pathway to Independence Award (K99/R00) program is to facilitate a timely transition of outstanding postdoctoral researchers with a research and/or clinical doctorate degree from mentored, 2 postdoctoral research positions to independent, tenure-track or equivalent faculty positions. The program will provide independent NIH research support during this transition in order to help awardees to launch competitive, independent research careers. Application Deadline: June 12, 2024.

Please visit the Office of Sponsored Research page on the NCIRE SharePoint at <a href="https://ncire.sharepoint.com/">https://ncire.sharepoint.com/</a> or click <a href="https://ncire.sharepoint.com/">here</a> for the full list of Federal Funding Opportunities.

# In the Helix



Yvonne Chan Administrative Assistant III NCIRE Core Staff

Q: What is your favorite place on the Ft. Miley or Mission Bay campus?

A: The sitting area behind the Veterans Canteen to enjoy the panoramic views; it makes me feel so relaxed and refreshed.

Q: What is one thing, big or small, you did last year that you will never forget?

A: Long flight to my parents hometown to visit relatives, enjoy the food, and spending memorable time with them. Hopefully we can go again soon.

Q: Which actor would you want to play you in the movie about your life?

A: The actress Cherie Chung from the movie An Autumn's Tale; she is polite, kind and humble.



Elena Brown Human Resources Generalist NCIRE Core Staff

Q: What is your favorite place on the Ft. Miley or Mission Bay campus?

A: I would have to say the Veterans Canteen. It's a great place to grab a mid-day snack!

Q: What is one thing, big or small, you did last year that you will never forget?

A: I went to Ireland with my mom last summer. We traveled around the coast and went on some amazing hikes.

Q: Which actor would you want to play you in the movie about your life?

A: If I could pick any actor to play me, it would have to be Olivia Colman. I am a big fan and think she is incredible in every part she plays.

If you or someone you know is an NCIRE employee and would like to be featuered in *In the Helix*, contact us at <a href="mailto:dna@ncire.org">dna@ncire.org</a>.

# **Message from the Chief Executive Officer**

Spring is here! During the rain and cold, it was hard to imagine sunshine and warmer weather. I hope you are able to enjoy this time of year.

Thank you to the contributions to the Spring 2024 Newsletter from Amy L. Byers, PhD, MPH and Warren Gasper, MD, who have illuminated their respective research. Their time and commitment are invaluable.

In February, an email was sent to Principal Investigators regrading NCIRE's Federal Administrative Accounts. At the end of the first quarter of fiscal year 2024, the utilization rate for these Accounts was 79%. Ideally the utilization rate should be closer to 100% for NCIRE to maintain its current indirect cost rate of 53.3%. Maintaining the delicate spending rate between direct and indirect costs is critical to NCIRE's ability to maintain the provisional indirect cost rate. Please be mindful of these accounts, if you have questions, contact the NCIRE Office of Sponsored Research at <a href="maintainto:cgawards@ncire.org">cgawards@ncire.org</a>.

The annual financial statement audit and federal program compliance audit were recently completed for Fiscal Year 2023 (10/1/2022-9/30/2023). The audit report indicated an unmodified opinion or a clean report, financial statement presented fairly in all material respects and in accordance with U.S. GAAP. NCIRE continues to demonstrate compliance with Uniform Guidance (2 C.F.R. Part 200): 2 C.F.R Part 200 establishes uniform administrative requirements, cost principles, and audit requirements for Federal Awards to non-federal entities. The report can be found here.

As of March 8, 2024, there are 16 new awards for fiscal year 2024, 3 NIH Prime Awards, 7 Federal Subcontracts, 1 State/UCOP, 3 Foundation/Other, and 2 Industry Awards (CRADA). This demonstrates positive momentum at the 6-month mark of the fiscal year.

Thank you for taking time to read our Spring 2024 Newsletter. Please let me know if you have any questions or comments.

Rebecca Rosales, MBA, CRA Chief Executive Officer

#### **About NCIRE**

NCIRE - The Northern California Institute for Research and Education has one mission and one goal: Advancing Veterans Health. We sustain a scientific community of clinicians and researchers and support nearly 200 researchers who have joint faculty appointments at the University of California, San Francisco (UCSF) and the San Francisco VA Health Care System (SFVAHCS) and are working to foster innovation through leadership in the field of Veterans health research. Our broad portfolio of projects receives generous support from the National Institutes of Health, the Department of Defense, and individual donors, making us the largest nonprofit research institute devoted to Veterans health in the US.

NCIRE is a 501(c)3 nonprofit. (Tax ID #94-3084159). Visit NCIRE at www.ncire.org

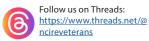




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