

VA Research and COVID-19

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Sylvester Norman, a 67-year-old Coast Guard veteran and retired day-care worker from Nashville, Tennessee, volunteered to participate in the US Department of Veterans Affairs (VA) Million Veteran Program (MVP). He and all 4 of his brothers had experienced kidney illness. During the pandemic, Adriana Hung, MD, MPH, an MVP researcher and associate professor of nephrology at Vanderbilt University, noticed that a disproportionate number of Black patients hospitalized with COVID-19 were dying of acute kidney failure. Dr. Hung used data from Norman and other Black veterans provided through the MVP to identify genetic variations in the *APOL1* gene linked to kidney disease found in 1 of every 8 people of African descent. Her research proved that a COVID-19 viral infection can trigger these genes and drive a patient's kidneys to go into failure. Thanks to her research and volunteers like Norman, a new drug targeting *APOL1* may soon receive approval from the US Food and Drug Administration (FDA).

This is only one example of the life-saving work conducted by the Veterans Health Administration (VHA) during the pandemic. On January 21, 2020, 1 day after the first confirmed COVID-19 case in the US, the VHA quickly activated its Emergency Management Coordination Cell (EMCC) under a unified command structure with round-the-clock operations to track the evolving risk and plan a response to this once-in-a-century pandemic. A few months later, and before the US declared COVID-19 a pandemic, the VHA research program sprang into action, preparing its community of investigators to address the emerging needs and challenges of the COVID-19 public health crisis. Three years later, although the federal COVID-19 public emergency is declared over, the VHA remains diligent in observing trends and conducting necessary research on the disease as case numbers rise and fall across time.

This special issue of *Federal Practitioner* showcases the many ways that the VHA successfully leveraged and rapidly mobilized its research enterprise capabilities as part of the national response to COVID-19 and continues to work in this area. As the virus rapidly spread across the country, the VHA research

program, overseen by the Office of Research and Development (ORD) and in partnership with other VHA offices, demonstrated the strength and agility that come from being part of a nationwide integrated health care system.

Historically, the VHA has been one of the nation's leaders in translating medical breakthroughs to the treatment and care of veterans and the nation. Today, the VHA ensures that veterans have increased access to innovative health care solutions by promoting new medical research initiatives, training health care professionals, and developing community partnerships.

As this special issue of *Federal Practitioner* demonstrates, the VHA's extraordinary research response to the COVID-19 pandemic was shaped by its ongoing transformation to a full-scale research enterprise; diversity of partnerships with academia, other federal agencies, and industry; extensive infrastructure for funding and quickly ramping up multisite clinical trials; and longstanding partnership with veterans, who volunteer to serve their country twice—first in uniform, and later by volunteering to participate in VA research.

By leveraging these and other assets, VHA investigators have conducted > 900 COVID-19 research projects across 83 VA medical centers, with nearly 3000 VA-affiliated papers published by mid-2023. We have also become a leader in long COVID, generating notable findings using our electronic health record data and filling in the picture with studies that include interviews with thousands of patients, examinations of blood markers, and exploration of the role of genetics. Along the way, the VA collaborated with federal partners, such as the US Department of Defense, by funding a longitudinal research cohort in which 2800 veterans are enrolled. Through this joint effort, researchers will learn more about the natural history and outcomes among veterans affected by COVID-19. This work continues as part of the VA commitment to the health and care of these veterans and nation as a whole.

Additionally, by partnering with veterans, the VA established a research volunteer registry. More than 58,000 veterans volunteered to be contacted to participate in studies if they were eligible. This effort was critical to the VA's ability to contribute to the vaccine and other

therapeutic trials that were seeking approval from the FDA for broader public use. This volunteerism by these veterans showed the nation that the VA is a valuable partner in times of need.

The VA research program remains tightly focused on understanding the long-term impacts of COVID-19. At the same time, the VA is committed to using lessons learned during the crisis in addressing high priorities in veterans' health care. Among those priorities is fulfilling our mission under the Sergeant First Class Heath Robinson Honoring Our Promise to Address Comprehensive Toxics (PACT) Act of 2022 to improve care for veterans with military environmental exposures. Over the next few years, VA researchers will analyze health care and epidemiologic data to improve the identification and treatment of medical conditions potentially associated with toxic exposures. This work will include analyses of health trends of post-9/11 veterans, cancer rates among veterans, toxic exposure and mental health outcomes, and the health effects of jet fuels.

Our research program also will support the VA priority of hiring faster and more competi-

tively. With many of the 3700 VA-funded principal investigators also serving as faculty at top universities, VA research programs position us to recruit the best and brightest professionals on the cutting edge of health care. These efforts work hand in hand with the clinical training the VA provides to 113,000 health professions trainees, creating a pipeline of clinicians and physician-researchers for the future. Further, these partnerships strengthen the VA's ability to expand access by connecting veterans to the best, immediate care.

Finally, VA research will continue to be critical to our top clinical priority of preventing veteran suicide. This area of VA research covers a wide and critically important set of topics, such as the use of predictive modeling to determine veterans most at risk as well as studies on substance use disorders and suicidal ideation, among others.

The impressive collection of articles in this special issue provides a snapshot of the large-scale, all-hands approach the VHA adopted during the COVID-19 public health crisis. I am extremely proud of the work you are about to read.