VHA 2024 STATE OF INNOVATION REPORT

FROM PROMISE TO PROGRESS

EVOLVING VETERAN HEALTHCARE

VA | U.S. Department of Veterans Affairs

Choose VA

To the Nation's Veterans,

The U.S. Department of Veterans Affairs (VA) recently announced an update to its mission statement: "To fulfill President Lincoln's promise to care for those who have served in our Nation's military and for their families, caregivers, and survivors." Innovation is fundamental in VA, helping us to deliver on Lincoln's promise with progress.

With more than 9 million Veterans enrolled in VA care, Veterans Health Administration (VHA) is the largest integrated healthcare system in the United States. Today, we are proud to say that 92% of Veterans trust VA with their healthcare. We focus on delivering care tailored to the unique needs of the Veteran community, including spinal cord injury, hearing loss, prosthetics and rehabilitation, traumatic brain injury, and posttraumatic stress disorder. Our expansive network spans 1,321 healthcare facilities across the United States and its territories.

What makes VA special is our employees who are dedicated to serving Veterans and their families every single day. Of VHA's more than 419,000 employees, 28% are Veterans themselves. Innovation provides frontline employees with a critically important outlet to share their ideas with VHA leadership on how to improve Veteran care. Through innovation, employees are encouraged to take risks, test assumptions, and reinvent care models, thereby allowing us to bridge gaps between our greatest strengths and areas where we seek improvement. Our people are the most essential ingredient for the change we hope to achieve together.

Innovation has long been a cornerstone of VHA, from developing the first implantable cardiac pacemaker in 1960 and the first electronic health record in 1970, to being one of the first U.S. healthcare systems to adopt 5G and test use cases in 2020. VA has been at the forefront of innovative healthcare for decades.

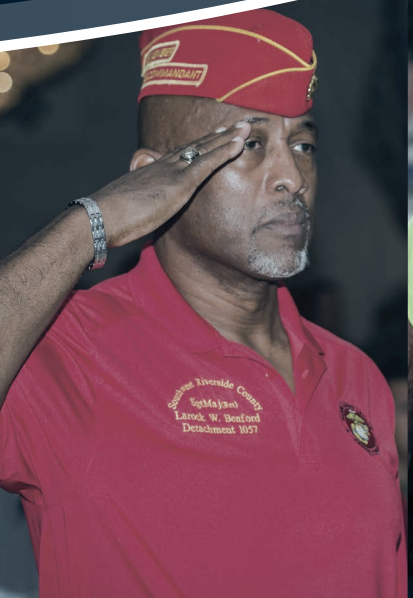
VHA's Office of Healthcare Innovation and Learning (OHIL) is dedicated to supporting and developing innovative healthcare solutions for Veterans. By embracing cutting-edge technologies and fostering a culture of continuous improvement, OHIL ensures that VA not only meets the diverse needs of our Veteran community but also anticipates and addresses future challenges.

The 2024 VHA State of Innovation Report is designed to educate and empower Veterans by sharing stories of innovative projects and programs relevant to their healthcare journeys. Each article offers insights into the specific needs the innovation addresses, and its positive impact on Veteran healthcare. The report also includes an index, listing highlighted programs and detailing their availability at VA facilities.

Thank you for your service and trust in VA. We are honored to serve you and remain committed to continually evolving to meet Veterans where they are.

Sincerely,

Dr. Carolyn Clancy
VA Assistant Under Secretary
for Health for Discovery, Education
and Affiliate Networks



A TIMELINE OF

VHA HEALTHCARE INNOVATION

1984

Nicotine Patch

Two decades after the 1964 Surgeon General's Report on Smoking and Health, VA researchers develop the nicotine patch and other therapies to combat cigarette addiction.

1990

Diabetes Drug

Endocrinologist Dr. John Eng, of the James J. Peters VA Medical Center, discovers a peptide in venom from the Gila monster that would eventually serve as the basis for a widely used diabetes drug.

2007

Ankle-Foot Prosthetic

VA unveils the first electric-powered ankle-foot prosthetic, which yields a faster walking pace and ultimately introduces a new era of innovation in prostheses.

2020

5G

VA Palo Alto Health Care System becomes one of the first U.S. healthcare systems to adopt 5G and test use cases.

2021

GioStent

U.S. Food and Drug Administration grants VA's first ever compassionate use authorization for a 3D-printed hearing device, the GioStent. The groundbreaking medical device is inserted into the ear canal to improve Veteran hearing as an alternative to surgery.

2022

Mission Daybreak

Preventing Veteran suicide is the top clinical priority for VA. VHA IE and VA's Office of Suicide Prevention launched Mission Daybreak, a $20M grand challenge to reduce Veteran suicides.

2023

VHA Radiotherapy Bolus

U.S. Food and Drug Administration clears the VHA Radiotherapy Bolus, a 3D-printed device that helps protect cancer patients' healthy tissue during radiation therapy, and instead, helps focus radiation on cancerous tumors.

Click here to learn more about the history of Innovation at VA!

INTRODUCTION TO

VHA'S OFFICE OF HEALTHCARE INNOVATION AND LEARNING

VHA's Office of Healthcare Innovation and Learning (OHIL) was founded in October 2020 with the mission to deliver transformative healthcare solutions to improve Veteran well-being.

Together, these programs advance VA healthcare delivery and experiences by:

Fostering
the discovery and spread of grassroots and strategic innovative solutions, practices, and products across VA

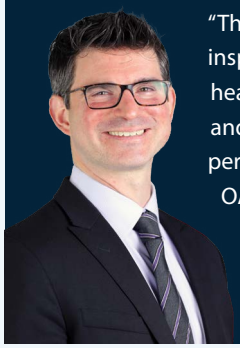
Empowering
front-line providers, innovators, and researchers to tackle clinical challenges through innovative product-based solutions with in-house manufacturing capabilities

Developing
innovative approaches to testing payment and service delivery models

Advancing
the use of clinical training and simulation to further VHA's mission of becoming a high-reliability organization

Office of Advanced Manufacturing (OAM)

VHA Office of Advanced Manufacturing (OAM) guides the use of advanced manufacturing technologies, like 3D printing, in healthcare applications in VA. OAM is developing national policy, providing oversight, and operating and coordinating VHA clinical advanced manufacturing laboratory services to provide equitable access to Veteran patient-matched medical devices. These innovations empower front-line providers to design and implement product-based solutions to clinical challenges, and they strengthen VA's supply chain by providing in-house manufacturing capabilities. OAM is building digital and physical infrastructure to bring medical device innovation and manufacturing back to VA, so that Veterans are first in line to receive new products and innovative services.



"The Office of Advanced Manufacturing provides internal innovation and manufacturing capacity, which can turn inspiration into a physical device, expanding the VA enterprise capacity to develop, create, and deliver world-class healthcare to Veterans. OAM accomplishes this by using 3D printing, coupled with clinical expertise, engineering, and design know-how within a robust quality management system. I am proud to know that OAM products provide personalized, safe, and equitable care for eligible Veterans while expanding advanced manufacturing across VA. OAM's personalized products provide Veterans with a level of care and participation they would not receive with off-the-shelf products."

—**Joe Beedle,** ***Executive Director, Office of Advanced Manufacturing***

VHA Innovation Ecosystem (VHA IE)

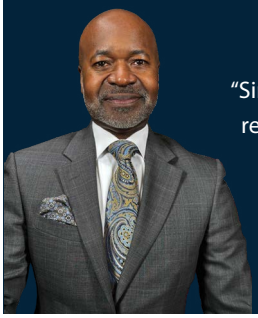
VHA IE is the catalyst for enabling the discovery and spread of mission-driven healthcare innovation to advance care delivery and service that exceed expectations, restore hope, and build trust within the Veteran community. VHA IE leverages the collective power of innovation champions from across VA, academia, other government agencies, and industry to operationalize innovation and scale best practices. Through these collaborations, VHA IE is able to test, scale, and deploy innovations into practice to deliver value for VA and Veterans.

"VHA Innovation Ecosystem serves as a pivotal force in advancing mission-driven healthcare innovation, that not only meets, but exceeds expectations. By harnessing the collective power of innovative employees from across VA, academia, and non-profit organizations, VHA IE is operationalizing innovation across the Nation's largest integrated healthcare system. This work is crucial to the strides OHIL is taking to improve healthcare and build trust within the Veteran community."

—**Kristopher "Kit" Teague,** ***Executive Director, VHA Innovation Ecosystem***

Simulation Learning, Evaluation, Assessment, and Research Network (SimLEARN)

SimLEARN is VHA's program for simulation in healthcare training. SimLEARN provides an ever-growing body of curricula and tools that improve Veteran well-being through simulation-based innovation and emerging technologies. The use of emerging technologies in a safe learning environment enhances diagnostic, procedural, and communication skills to support quality care and the best possible outcomes. SimLEARN also supports VHA's journey as a high-reliability and learning organization through the coordination of all national VHA simulation-based clinical education products and activities supporting enterprise-level innovative healthcare solutions.



"SimLEARN makes a profound impact on Veteran healthcare by offering simulation-based services, in a controlled, realistic, immersive environment, that help to reduce medical errors, improve patient safety, and optimize healthcare delivery. Through its focus on education, training, and validation, SimLEARN is transforming Veterans' healthcare and setting a new standard for continuous improvement and excellence in Veteran care."

—**Eric Bruns,** ***U.S. Army Veteran and Executive Director, SimLEARN***

Center for Care and Payment Information (CCPI)

Authorized by Section 152 of the MISSION Act of 2018, CCPI plays a critical role in ensuring that VA maximizes quality of care, while balancing costs known as high-value healthcare, and delivers needed services to Veterans. CCPI collaborates across the government and healthcare industry to design, develop, and test innovative approaches to enhance quality, accessibility, and equity of care. Through these collaborative efforts, CCPI aims to transform healthcare at VA and transition the system to a value-based model that comprehensively responds to the needs of Veterans while increasing efficiencies, reducing costs, and enhancing the quality of care provided.

"CCPI plays a critical role in supporting VA's dedication to improving the well-being of Veterans. Congress has given us the unique authority to test new care and payment models that aren't allowed under current law, enabling us to explore new frontiers in strategic healthcare payment and delivery. Though not all of our projects require this waiver, it provides us with the opportunity to experiment with new policies, care models, and payment systems—allowing VA to better understand their potential to transform Veteran care."

—**Dr. David Au,** ***Executive Director, Center for Care and Payment Innovation***

FROM PROMISE TO PROGRESS

EVOLVING VETERAN HEALTHCARE

VA is at the forefront of healthcare innovation, continuously evolving to meet the needs of Veterans. VHA's OHIL is dedicated to fulfilling the promise of transforming Veteran healthcare by investing in innovative programs, projects, and products. These innovations enhance Veteran's healthcare experience by expanding access to care, fostering mental health resiliency, delivering more through collaborations, and advancing healthcare solutions.

Throughout this report, Veterans can explore efforts currently being piloted, soon to be available, or already accessible at their local VA facilities.

CONTENTS

EXPANDING OUR REACH

ACCESS TO CARE AND SERVICES

VA is committed to providing Veterans with the soonest and best care, regardless of where they live, their age, or their gender. This year, VA has enrolled a record number of Veterans, including a record number of women Veterans. This means an increased demand for VA services, requiring more innovative programs to enhance care for Veterans. VA programs that expand access to meet the demand include digital health and remote monitoring platforms, resources for Veteran caregivers that empower them to provide the best care for Veterans, and tools to help Veterans and VA employees prevent and reduce the harmful effects of drug use.

This section features these programs and the VA innovators whose work has expanded access to care and services and fostered increased trust among Veterans, their families, and caregivers.

Equipping Caregivers, Protecting Veterans

CPR Training Expands Through Caregiver Support Program

"I feel much more comfortable compared to when I first entered the room. I feel really good about [performing CPR], like I could do this, and I would love to take it again for my own memory and confidence."

— Veteran Caregiver who received Hands-Only CPR training

Madeline Anderson, Chief Resident in Quality and Safety at Lexington VA, performs CPR during Hands-Only CPR training.

According to the Centers for Disease Control and Prevention, of the over 356,000 out-of-hospital cardiac arrests occurring annually, 75-80% happen at home. If performed immediately, cardiopulmonary resuscitation (CPR) can double or triple the chance of survival from an out-of-hospital cardiac arrest. Not only do Veterans receive high-quality care in VA facilities from their providers, but VA empowers Veterans' families, friends, and support systems to supplement their care at home. VHA's Caregiver Support Program (CSP) and SimLEARN's Resuscitation Education and Innovation (REdI) portfolio launched the **Hands-Only CPR training** to enhance support for caregivers who play a crucial role in extending Veteran care beyond VA facilities.

CSP was initially developed to support caregivers of Veterans returning from conflicts in Iraq and Afghanistan who required personal care services. In 2018, the program expanded significantly with the passage of the VA MISSION Act, extending eligibility so that caregivers of Veterans from all eras might access the program's resources. Caregivers are often the most trusted individuals in a Veteran's life. By solidifying their role as an integral member of a Veteran's care team, it becomes easier for Veterans to navigate the VA healthcare system, leading to improved health outcomes.

Amy Lindsey-Colon, Health Education Specialist, demonstrates Hands-Only CPR.

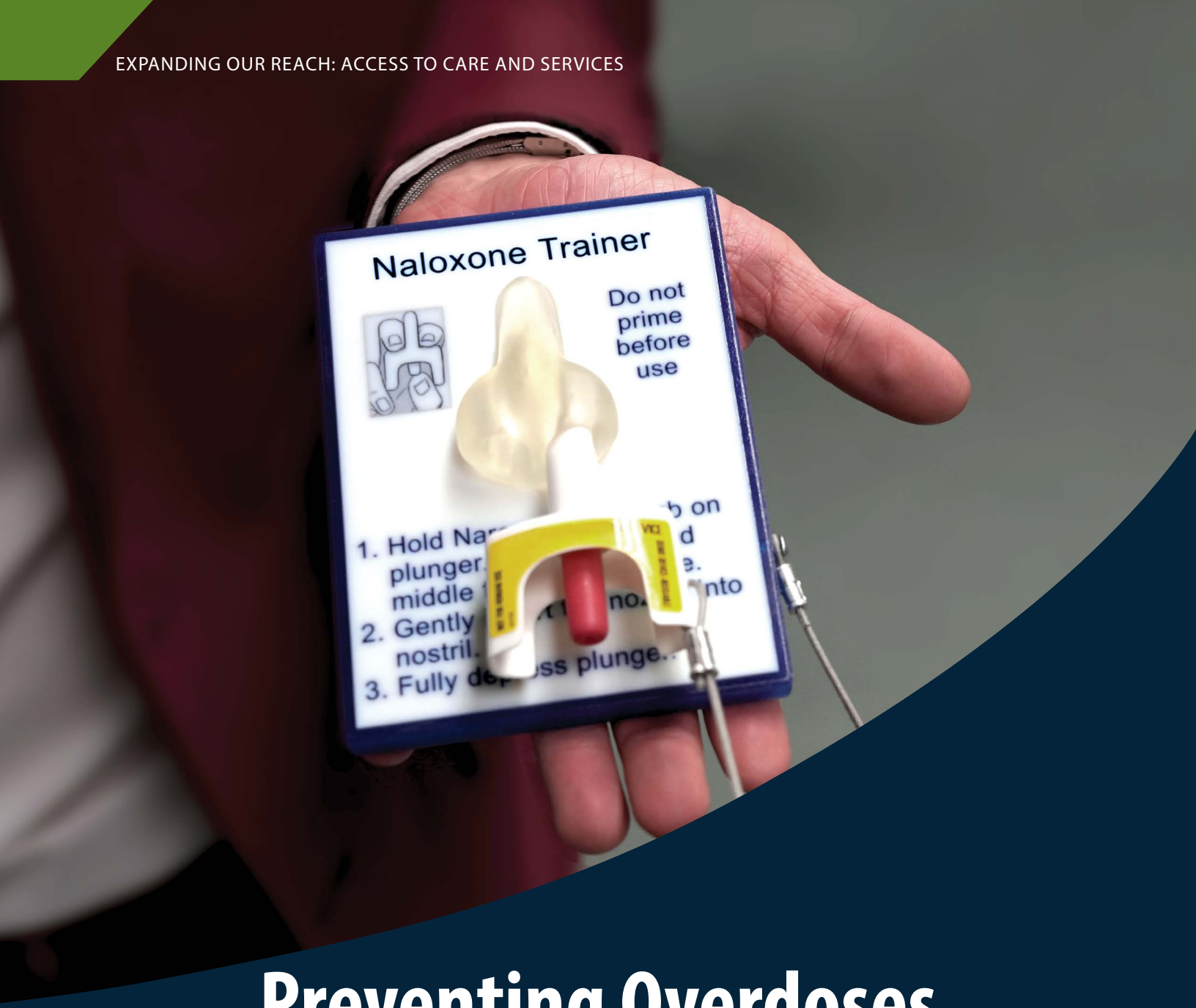
Hands-Only CPR training is available at 44 VA facilities. Learn more on page 75!

Since expanding from approximately 19,000 to over 85,000 eligible caregivers, training has emerged as a fundamental aspect of CSP's support. Using REdI's well-established "Family and Friends" training curriculum, CSP enables caregivers to receive customized training, supplies, and certifications to meet their needs. One of the most frequent requests from CSP participants was for additional training on CPR.

With robust simulation-based CPR training already provided to VA employees by the REdI portfolio, CSP has been able to offer more frequent and comprehensive training to those in the program. REdI has built upon existing American Heart Association courses to develop the Hands-Only CPR training while also using their national reach to train the trainers, accelerating CSP's ability to provide CPR courses nationally.

Feedback received from caregivers participating in CPR training further emphasizes its impact. One caregiver remarked, "I feel much more comfortable compared to when I first entered the room. I feel really good about [performing CPR], like I could do this, and I would love to take it again for my own memory and confidence." Another caregiver said, "All caregivers should be required to take this."

The Hands-Only CPR training is offered to caregivers at 44 VA facilities across the country, with plans to expand. REdI continues to develop national curricula for VA employees and is helping CSP provide caregivers with training on additional lifesaving skills, first aid, transferring Veterans to and from VA facilities, and more—further expanding the blanket of care beyond the physical walls of VA facilities. This initiative not only prepares caregivers for emergencies, but also strengthens the entire support system surrounding Veterans. This program ultimately enhances both Veteran safety and quality of life.



Preventing Overdoses

3D-printed Trainer Provides Lifesaving Overdose Prevention Education

300
Trainers Ordered in the First Month

584
Trainers Have Been Shipped

50+
VA Facilities Engaged

A nurse demonstrates the Naloxone Trainer.

Chronic pain impacts up to 70% of Veterans and is the leading cause of disability among Veterans. For Veterans who are prescribed opioids, the potential danger of misuse or overdose is a daily reality. Opioid overdoses among Veterans continue to rise despite reductions in opioid prescriptions. Veterans have been heavily impacted by the opioid overdose crisis, with overdose mortality rates increasing by 53% from 2010 to 2019. Educating Veterans, their families, and caregivers on how to effectively respond to an overdose can mean the difference between life and death.

Diane Mosey, a dedicated nurse at Milwaukee VA Medical Center, created the innovative **Naloxone Trainer** in recognition of this pressing need. This groundbreaking initiative emerged from a simple yet powerful idea to create a sustainable and accessible method to educate employees and Veterans on how to respond to opioid overdoses. Naloxone is a medication designed to rapidly reverse opioid overdose. When used immediately for a suspected or known overdose, it can block the effects of opioids and help prevent death. Naloxone can be administered as a nasal spray or as an injectable medication, depending on the type available. With the support of OAM and SimLEARN, Mosey's vision transformed into a reality.

The Naloxone Trainer stands as a testament to the commitment of VA employees in addressing the critical issue of opioid overdose response. It started with a modest prototype held together with plywood and a wristband created by Mosey. With support from Dr. Katie Schultz, 3D Printing Program Manager at VISN 12 - VA Great Lakes Health Care System, the Naloxone Trainer underwent several design improvements. Dr. Schultz leads the development and implementation of the Naloxone Trainer, ensuring its effectiveness and accessibility.

Naloxone Trainer is available at 22 VA facilities.
Learn more on page 76!

Through step-by-step instructions and hands-on training, individuals can familiarize themselves with the lifesaving process of administering naloxone, potentially reducing hesitation and saving lives. The design prioritizes simplicity and effectiveness by addressing the unique challenges Veterans and VA employees face. The device features a lifelike 3D-printed nose and a simulated naloxone nasal spray device that enables users to practice administering the medication. Dr. Schultz emphasizes the importance of muscle memory and experience, highlighting how the trainer provides essential practice and knowledge in a calm setting. This practical training helps individuals respond confidently and precisely during opioid emergencies. Beyond its design, the rapid dissemination of the Naloxone Trainer across VA underscores its significant impact in addressing the escalating opioid crisis within the Veteran community.

Recognizing its potential to revolutionize opioid overdose response, SimLEARN also incorporated the Naloxone Trainer into their extensive network of training programs. "Empowerment in the palm of your hand," is how Lisa Baker, U.S. Navy Veteran and SimLEARN's Director of Resuscitation Education and Outreach, described the innovation. "By leveraging 3D-printing technology from OAM, the Naloxone Trainer offers immediate, hands-on, self-directed education—representing a significant safety breakthrough."

SimLEARN has continued to showcase the Naloxone Trainer at various facilities, demonstrating its effectiveness as a visual and hands-on educational tool for VA employees. The trainer has also been integrated into the SimLEARN Opioid Prevention Education program's Addiction Mini-Residency training course with plans to further scale its use among VA employees.

"Education is a powerful tool. If we can provide that education and that experiential training to help VA employees, Veterans, their families, and caregivers build confidence, then I think that we're improving the lives of Veterans."

— Dr. Katie Schultz, 3D Printing Program Manager at VISN 12 - VA Great Lakes Health Care System

Providing Relief to Veteran Caregivers

VA's Tech Enabled Respite Homecare Pilot (TERHM) Increases Access to High-quality Care and Supports Veterans and Their Caregivers

VA's mission, updated in March 2023, calls upon the organization to not only provide care and benefits for Veterans, but to ensure that their families, caregivers, and survivors are cared for. VA data shows there are almost 5.5 million caregivers caring for Veterans—70% of those are spouses or partners and 96% are women. Primary caregivers help Veterans with activities of daily life, like eating, getting dressed, personal hygiene, and grocery shopping. VA offers a wide range of benefits and support programs for caregivers. Despite this, many Veterans choose to rely on trusted friends and family members for care, particularly in rural areas where resources are limited.

John, U.S. Navy Veteran, and his wife Carolyn

For eligible Veterans, VA's Homemaker Home Health Aide program supports trained primary caregivers who visit Veteran homes and allow them to age in a place where they are more comfortable. The **TERHM, or Technology Enabled Respite Homecare Model**, pilot allows eligible Veterans, referred by their VA primary care providers, a choice in selecting who provides their approved homecare hours. The TERHM program aligns with the Executive Order on Increasing Access to High-Quality Care and Supporting Caregivers signed by President Biden in April 2023. Programs that offer respite care, like TERHM, are designed to provide primary caregivers with the opportunity to take a break and attend to their own needs while someone the Veteran trusts attends to the needs of the Veteran.

VA's various homecare programs impact Veterans like John, a U.S. Navy Veteran who served in Vietnam. With a 100% service-connected disability and several complex health conditions, like diabetes and chronic obstructive pulmonary disease (COPD), John requires daily support from a homecare aide. His wife, Carolyn, also provides support as a primary caregiver. "My husband requires around the clock support. Our home health aide comes in everyday from 9 to 5 and we couldn't do it without her, but there are times when I need more support so that I can rest, care for my own needs, or travel to visit my family across the country. The ability for us to choose another trusted caregiver to help my husband when I'm away gives both of us peace of mind," she said.

TERHM is available at 6 VA facilities. Click here or learn more on page 76!

Launched at six VA medical centers, including VA Boston Health Care System, Washington VA Medical Center (D.C.), Manchester VA Medical Center, Nashville VA Medical Center, Central Virginia VA Health Care System, and Orlando VA Healthcare System, the TERHM pilot encourages Veterans to either nominate a preferred adult in their life to become trained, vetted, and hired to provide their homecare or to choose a professional homecare aide.

In addition to empowering Veterans, the program also offers their homecare aides the opportunity to professionalize their roles by providing formal training, insurance, and wages that are significantly higher than national average wages. Participating homecare aides are paid on average $22 per hour while the national average is less than $15 per hour. Homecare aides can access training, submit timecards, and manage homecare tasks for the Veteran remotely through a mobile app.

Early findings from a one year pilot evaluation found that more Veterans accessed in-home care, and showed a high overall Veteran satisfaction. Veterans expressed the leading value of this program is gaining the autonomy to choose their own homecare aide. Overall, homecare aides were also highly satisfied with the pilot and reported receiving more hourly wage/compensation than before the pilot. Staff participating in the pilot found no major changes to clinic workflow but suggested nursing oversight, staff education, and communication coordination to improve implementation efforts.

VA offers a wide range of home care services Veterans can access nationwide. Veterans enrolled in VA care can contact their VA primary care provider, social worker, or visit Geriatrics and Extended Care website for additional information.

iStock/GaryRadler

PACT PT Makes Same-day Physical Therapy a Reality for Veterans

New Model of Care Expands Access and Reaches More Rural Veterans

Traditionally, Veterans experiencing common musculoskeletal or neurological issues have needed to spend weeks visiting numerous specialists before getting an appointment with a physical therapist. Because of these hurdles that Veterans face, only nine to 12% of Veterans follow up on their doctors' order to see a physical therapist. To combat this, and give these Veterans immediate access to physical therapy, VHA's Office of Rehabilitation and Prosthetic Services, in conjunction with the Office of Primary Care, has developed a proactive and personalized approach to same-day physical therapy for Veterans through the **VA Physical Therapy Patient Aligned Care Team (PACT PT)**.

"Veterans seeking same-day physical therapy or who are interested in the program should double check with their primary care provider. If they are being treated at a facility that has the PACT PT program, they can pull the physical therapist from down the hall. For Veterans who do not have PACT PT at their facility, they can still talk to their primary care provider. The more Veterans that request this service, the easier it is to reach additional sites."

— Amber Goetschius, U.S. Army Veteran, Acting Director of VHA IE Fellowships and Diffusion Specialist

Shutterstock/Robert Kneschke

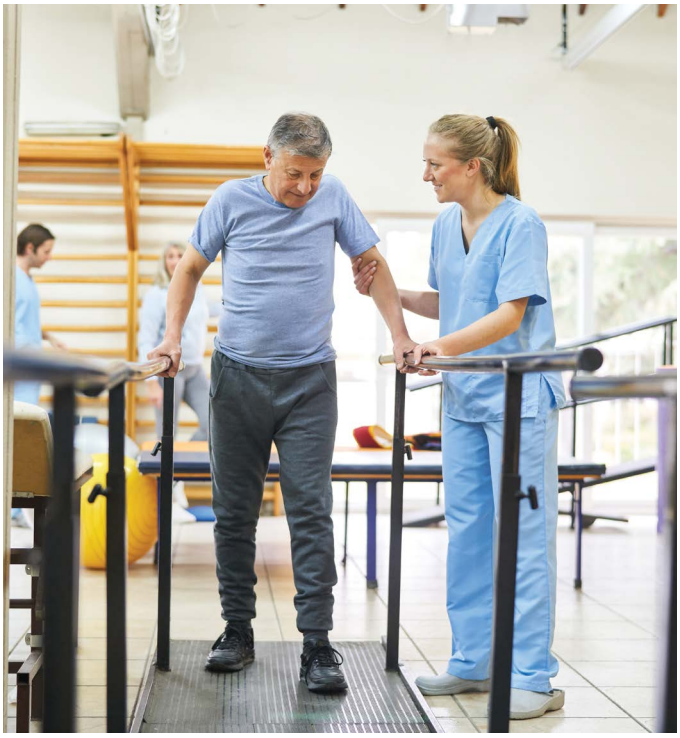
"We wanted to find a better way of doing things. Traditional physical therapy is not the most agile way to provide care for Veterans. It does not allow us to do a lot of things in that immediate moment," said Dr. Amanda Simone, a Physical Therapist in the VA Midwest Health Care Network. "Evidence says that the sooner we can start PT, the better the outcome is going to be; something the traditional model doesn't facilitate."

By embedding physical therapists into the primary care team processes, Veterans have access to same-day care for musculoskeletal or neurological issues. Craig Wagner, U.S. Navy Veteran who receives care at the Orlando VA Medical Center, knows firsthand the value of PACT PT. "I was having an ankle problem, so I went to my primary care doctor. He took me next door to the physical therapist, and she immediately treated me. In three days, I was back to my cherished daily walk with my wife. Without that service it would have been a month before I received treatment and probably longer until I was back in action."

For Veterans living in rural locations, PACT PT eases the hardship of navigating multiple, in-person appointments. Now, Veterans can receive all the services they need at one appointment and follow up with virtual visits. Brandon Peterson, PACT PT Physical Therapist in the VA Sioux Falls Health Care System, shared, "Offering this service to Veterans who may already be in the hospital for appointments and may travel long distances to get here is a great advantage for everybody and an opportunity we want to capitalize on for Veterans before they go home."

This 2020 VHA Shark Tank Competition winner has been successfully adopted at 113 VA healthcare systems, encompassing 194 different facilities, with plans to expand to additional VA facilities. "The plan is to embed PACT PT into every VA healthcare system by 2025 and lead the way within and beyond VA," said Dr. Ashley Cassel, Assistant Chief of Physical Therapy in the Minneapolis VA Health Care System. "Our goal is to develop and ramp up clinical training to make sure that we're building and supporting clinicians going into primary care, now and in the future."

U.S. Army Veteran Amber Goetschius, Acting Director of VHA IE Fellowships and Diffusion Specialist, said, "Veterans seeking same-day physical therapy or who are interested in the program should double check with their primary care provider. If they are being treated at a facility that has the PACT PT program, they can pull the physical therapist from down the hall. For Veterans who do not have PACT PT at their facility, they can still talk to their primary care provider. The more Veterans that request this service, the easier it is to reach additional sites."



PACT PT is available at 194 VA facilities.
Click here or learn more on page 76!

Limb Preservation Innovation "HELPPs" At-risk Veterans in Rural Areas

Intermediate Care Technicians and Telehealth Extend Reach of VA Podiatrists

Brian Telles, VISN 7 Clinical Resource Hub Lead Podiatry Intermediate Care Technician, using doppler ultrasound to listen for the dorsalis pedis pulse.

"We realized during the pandemic that all of these Veterans had gone a year without nail and callus care," Dr. Salvo said. "Being able to reach them in a new, more accessible way has allowed us to expand care and, in many cases, minimize risk of amputation."

— Dr. Nichol Salvo, Chief of Podiatry at the Joseph Maxwell Cleland Atlanta VA Medical Center, Deputy Director of VHA's National Podiatry Program, and 2024 VHA IE Senior Innovation Fellow

Basic foot care and regular podiatric care are essential for Veterans with diabetes. Gaps in podiatric care can lead to discomfort from untrimmed nails and calluses and, in extreme cases, increased risk of limb amputation. During the COVID-19 pandemic, VA primary podiatry care sites across the Nation paused face-to-face care for varying durations. As a result, Dr. Nichol Salvo, Chief of Podiatry at the Joseph Maxwell Cleland Atlanta VA Medical Center and Deputy Director of VHA's National Podiatry Program, stopped seeing Veterans with diabetes living in rural areas for in-person basic foot care.

Recognizing that these Veterans were missing out on potentially life-saving care, Dr. Salvo created the **High-Risk Eye and Limb Preservation Program, or HELPP.** This program integrates former military medics who now work as either VA providers or intermediate care technicians (ICTs) into elective podiatric visits at rural VA community-based outpatient clinics that do not offer their own podiatry services. HELPP's teamwork between virtual podiatrists and in-person ICTs has helped Veterans with diabetes across the Atlanta area receive crucial care for nail and callus cutting.

"We realized during the pandemic that all of these Veterans had gone a year without nail and callus care," Dr. Salvo said. "Being able to reach them in a new, more accessible way has allowed us to expand care and, in many cases, minimize risk of amputation."

Looking to explore new innovations and bridge gaps in care access, Dr. Salvo began using telehealth to monitor ICTs as they provided nail and callus cutting. This allowed Veterans to receive care closer to their homes rather than having to travel to Atlanta, while keeping their care within VA. HELPP's benefits have only grown since its inception.

In July 2023, the average wait time for Veterans seeking a podiatry appointment in the Atlanta network was 30 days. As of April 2024, wait times have decreased to approximately 22 days. This is lower than the 39-day average wait time nationally. Dr. Salvo says HELPP has enormous potential should it expand beyond the Atlanta area and can become a crucial part of podiatry for Veterans living in remote locations or experiencing other barriers to reaching their closest VA facility.

"Digital and remote health solutions have great potential to both provide care to Veterans and reach them with critical preventative care. HELPP empowers Veterans to monitor and manage their symptoms closer to home," said Dr. Lindsay Riegler, Director of VA's Digital and Remote Health Center for Innovation. Recently, HELPP was selected as a 2025 VHA Office of Rural Health Enterprise-Wide Initiative, with plans to expand to VA Louisville Healthcare System, Cookeville VA Clinic in Tennessee, and Corpus Christi VA Clinic in Texas.

Today, ICTs are also able to:

Reduce Wait Times

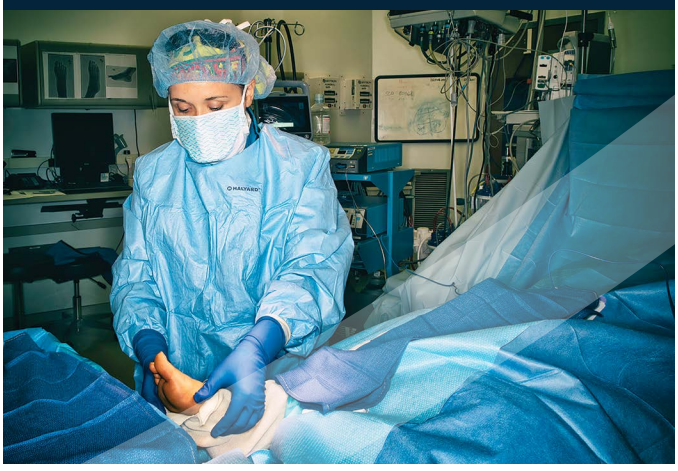
by connecting Veteranss with podiatric care immediately after examination

Measure Veterans

for diabetic socks and shoe prescriptions

Facilitate Enrollment

into the remote temperature monitoring program to detect foot ulcers before they appear

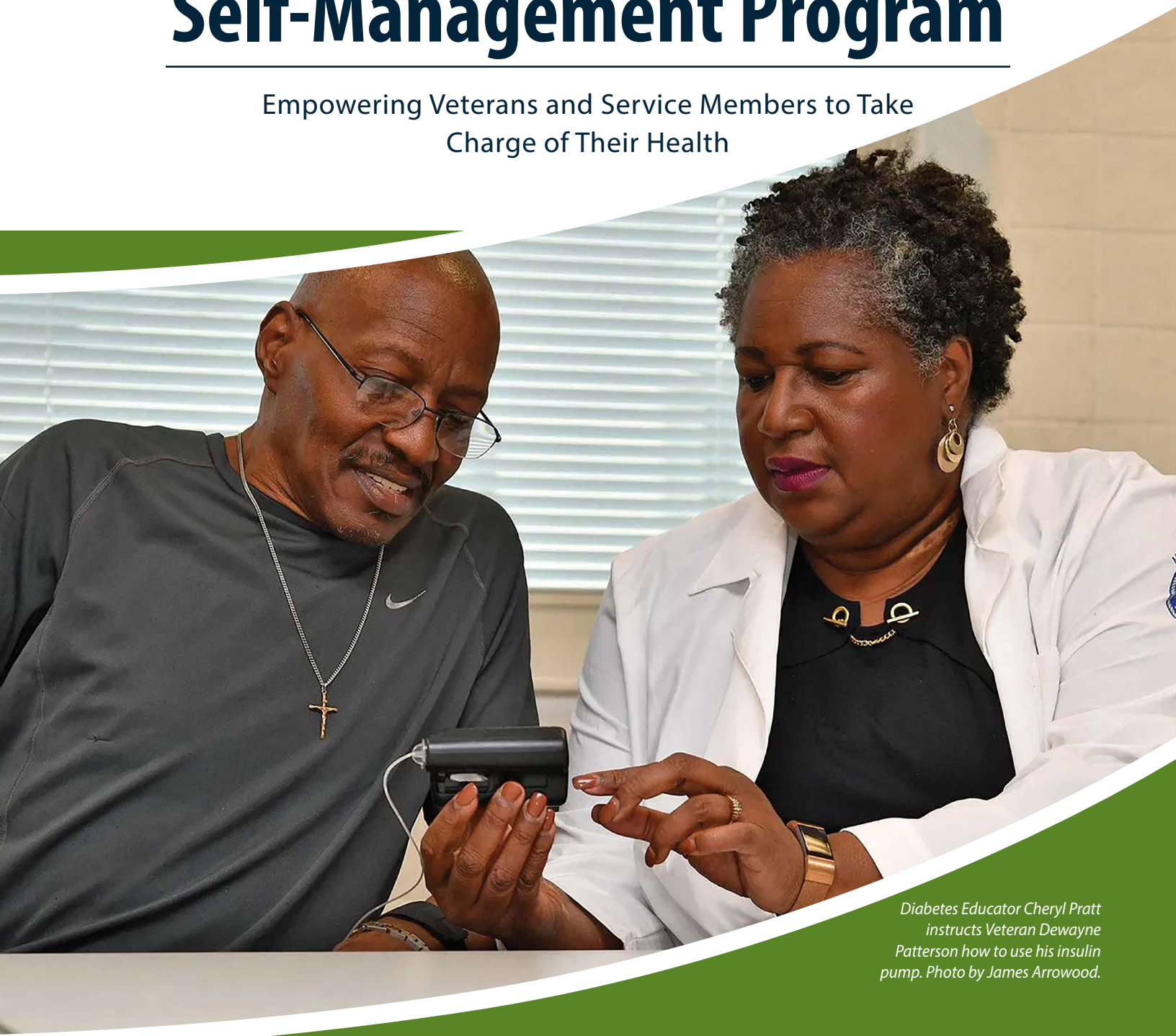


Dr. Nichol Salvo performing podaitric surgery.

HELPP is available at 1 VA facility.
Click here or learn more on page 77!

Diabetes Self-Management Program

Empowering Veterans and Service Members to Take Charge of Their Health



Diabetes Educator Cheryl Pratt instructs Veteran Dewayne Patterson how to use his insulin pump. Photo by James Arrowood.

In 2023 DSMES...

reduced patients' A1C by an average of 1.56%

reduced microvascular events by 30%

"Even with this program, only 4% of Veterans and 1% of service members have access to these services. We strongly encourage all individuals diagnosed with diabetes to be offered these services."

— Mary Julius, Quality Manager of the National VA-DOD Virtual Diabetes Self-Management Education Program

Diabetes affects nearly 25% of Veterans who receive care at VA and is a leading cause of blindness, end-stage renal disease, and amputation for those Veterans. For the 1.8 million Veterans living with diabetes, access to tools and education that help them monitor and manage their diabetes can significantly improve their quality of life.

Diabetes Self-Management Education and Support (DSMES) is a dynamic program in which people with diabetes gain knowledge, self-management skills, and support needed to make changes to better manage their diabetes through ever-changing life situations. It is an interactive, ongoing process engaging the person with diabetes, the caregiver or family, and a Certified Diabetes Care and Education Specialist. The aim of DSMES is not only to achieve health targets but also to improve quality of life. Quarterly trainings for qualified instructional team members began in 2019. The program has since expanded nationally, and is now offered at 56 VA facilities and nine DOD facilities.

With support from the Louis Stokes Cleveland VA Medical Center, VA and DOD organized a joint program to meet the unique need for DSMES among Veterans and DOD service members. Spearheaded by Mary Julius, DSMES Quality Manager of the National VA-DOD Virtual Diabetes Self-Management Education Program and 2024 VHA IE Senior Innovation Fellow, the program provides Veterans and DOD service members with self-management education services. DSMES is offered in person and via telephone, through VA's Virtual Medical Center and VA Video Connect.

"Even with this program, only 4% of Veterans and 1% of service members have access to these services. We strongly encourage all individuals diagnosed with diabetes to be offered these services, and the data supports this. Last year, the program reduced patients' A1C by an average of 1.65%, reducing the risk of microvascular events by 30% and improving the quality of life for these Veterans," says Julius.

Today, a significant focus of the DSMES program is to provide Veterans with monitoring, support, and access to continuous glucose monitors (CGMs), which are wearable devices that track blood glucose levels over time versus periodically. The DSMES team is training more providers to increase the reach of DSMES and bridge the gap in support offered to Veterans living with diabetes.

"CGMs are a new tool for Veterans, as well as their caregivers and VA providers. CGMs will increase Veterans' access to their care teams, while allowing the patient to feel more confident in managing their diabetes. We're working to ensure that Veterans who qualify for CGMs not only receive them, but are also getting training on those devices from their VA providers," said Dr. Brian Burke, Co-Executive Director of Endocrinology and Diabetes in VHA's Office of Specialty Care. "Knowing how to place the monitoring sensor and program it to their smart device as well as how to communicate with their VA provider are all important parts of DSMES."

Mr. Smith, a 92-year-old Korean War Veteran and DSMES beneficiary, uses his cell phone to scan and share his CGM to share data in real time with his son and healthcare providers. This technology saves him from making endless trips to his doctor's office. It also allows him to make timely adjustments to his insulin and diet, reducing the risk of severe low blood glucose. Mr. Smith loves the device. His only complaint is: "Why was this program not available five years ago?"

iStock/MihaPater

DSMES is available at 35 VA facilities.
Click here or learn more on page 77!

Harm Reduction Resources Build Trust Among Veterans

Peer-support Model Connects Veterans to Preventative Supplies

Substance use disorder (SUD), commonly known as "addiction," is an illness characterized by individuals struggling to manage their consumption of substances like alcohol, drugs, and opioids. When left untreated, this misuse can significantly impact various facets of one's life. According to research on Veteran SUDs, Veterans face challenges with substance abuse at a higher rate than the general population. About one in 10 Veterans who visit a VA facility for the first time struggles with SUDs.

Dr. Beth Dinges, a Clinical Pharmacist Practitioner and Harm Reduction Coordinator at the Illiana VA Healthcare System, and Dr. Minh Ho, Acting Chief of Infectious Disease and Staff Physician at the Orlando VA Healthcare System, work together on the **VA Delivery of Harm Reduction Supplies and Services program, known as Harm Reduction**. The program provides Veterans who use drugs with sterile syringes, fentanyl testing strips, STI and HIV tests, wound care equipment, pre-exposure prophylaxes, and other preventative supplies and services.

Drs. Dinges and Ho are 2024 VHA IE Entrepreneurs in Residence, working to reach more Veterans who use drugs with potentially lifesaving resources. "We often see that Veterans we work with are using drugs as a coping mechanism and experiencing difficulty managing symptoms related to their service, like adjusting to civilian life and managing symptoms of PTSD and pain," said Dr. Dinges.

Harm Reduction provides Veterans with access to products that reduce the likelihood of disease or infection transmission from substance use. To accomplish this, Drs. Dinges and Ho work to establish trust with substance users by leveraging community supplies and resources, as opposed to bringing Veterans

Veterans enrolled in VA healthcare will be able to access free harm reduction supplies such as sterile syringes, fentanyl test strips, and condoms through vending machines across the Nation.

"We're not tracking who is getting these supplies. There's no consequence for them coming back and getting more supplies, like a sterile syringe or fentanyl testing strip."

—Dr. Elizabeth Dinges, Clinical Pharmacist Practitioner and Harm Reduction Coordinator, VA Illiana Healthcare System

into a healthcare setting where they may feel intimidated or stigmatized. Their "patient navigators" network connects Veterans who have used or still use with other Veterans in the community who have a history of substance use. Together, these volunteer "patient navigators" distribute harm reduction supplies to their fellow Veterans in need. This Veteran-to-Veteran relationship helps Veterans outside the walls of a VA facility to build relationships and trust with peers who have similar experiences.

"We're not tracking who is getting these supplies," Dr. Dinges said. "There's no consequence for them coming back and getting more supplies, like a sterile syringe or fentanyl testing strip."

Harm Reduction is available at 10 VA facilities.
Click here or learn more on page 78!

Reaching Veterans who use substances can be difficult. Gaining their trust can be even more challenging. Dr. Ho noted that it is common for substance users to continue using drugs even with access to Harm Reduction services. However, seeing that unconditional help is available increases the likelihood that Veterans will seek help once they are ready.

Drs. Dinges and Ho created a Veteran Engagement Board (VEB) with the goal of providing a channel for Veterans who use or have used substances to share input on the Harm Reduction program. Currently a group of 10 Veterans, the VEB meets regularly and will continue to enable Veterans to have a voice in the room where decisions are made and make accessing healthcare less stigmatizing.

"We see that Veterans who use drugs relate to each other's experiences in a profound way. Having trusted Veteran peers reach Veterans with supplies that can keep them safer while using shows those users that unconditional help is available."

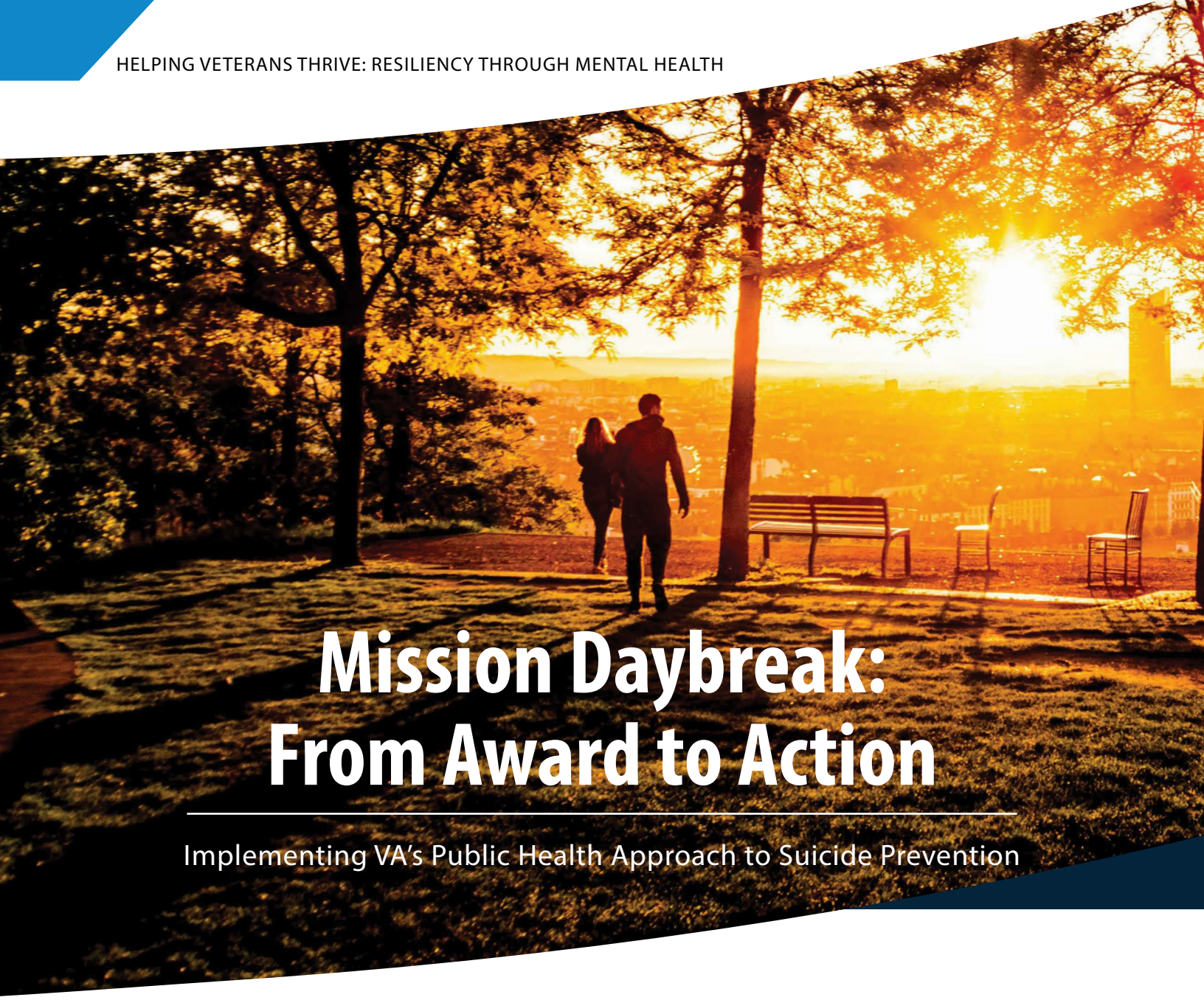
— Dr. Minh Ho, Acting Chief of Infectious Disease, Orlando VA Healthcare System

HELPING VETERANS THRIVE

RESILIENCY THROUGH MENTAL HEALTH

VA offers a broad range of innovative products and services to support the mental health and well-being of Veterans, advancing the critical mission of preventing Veteran suicide. Addressing risk factors like finances, housing, relationships, community support, and other barriers to accessing care is important when determining how to best support an individual Veteran's mental health. By focusing on the unique mental health needs of those who have served, VA offers cutting-edge solutions designed to build resilience and promote overall wellness.

This section features initiatives ranging from VA's $20 million suicide prevention grand challenge called Mission Daybreak, and various programs that facilitate increased social connection among Veterans, to a program focused on personalized, safe firearm storage.



Mission Daybreak: From Award to Action

Implementing VA's Public Health Approach to Suicide Prevention

Preventing suicide among Veterans is VA's top clinical priority, and everyone has a role to play. VA takes a public health approach to suicide prevention, combining community collaborations to implement tailored, local prevention plans with evidence-based clinical strategies for intervention. In 2022, VHA IE and VA's Office of Suicide Prevention launched **Mission Daybreak**, a $20 million grand challenge designed to help VA develop new suicide prevention strategies for Veterans. Through the Mission Daybreak grand challenge, VA sought to invest in diverse solutions to this public health issue to address as many protective and risk factors as possible.

At the time of its launch in 2022, Mission Daybreak was the single largest U.S. Government open innovation prize since the establishment of the America COMPETES Act. The $20 million grand challenge received over 1,300 submissions, and a multidisciplinary panel of experts awarded $8.5 million to 40 teams during Phase 1 and $11.5 million to 10 winners in Phase 2. Following the challenge, the Mission Daybreak teams began the work to translate their ideas into

Unsplash/Leonard Cotte

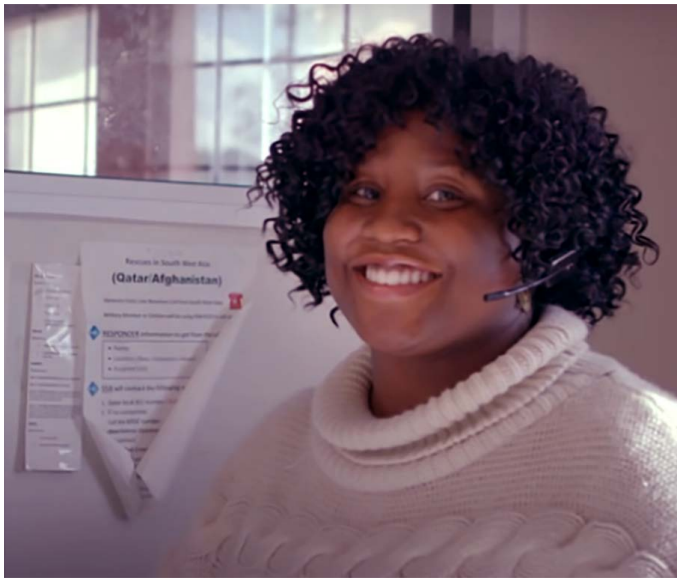
action. Building off the efforts that began with the grand challenge, Mission Daybreak launched the Innovator Series in May 2024 to provide suicide prevention solution teams with access to a number of resources designed to promote a better understanding of VA and the Veteran population. To date, 26 teams have benefited from the Innovator Series toolkits, expert interviews, and live events to accelerate the development of solutions toward VA readiness. As a result, five VA medical centers are now engaged in solution designs, contracts, and pilots.

"What we've seen is indicative that evidence-based care—that which we research and practice—really works," says Dr. Matthew Miller, Executive Director of VA's Office of Suicide Prevention. "There is an anchor of hope in the declining rate of suicide among Veterans with diagnoses of depression who have recently received VA care. Every day, we are making a difference in everything we're doing; we are saving lives."

"There is an anchor of hope in the declining rate of suicide among Veterans with diagnoses of depression who have recently received VHA care. Every day, we are making a difference in everything we're doing; we are saving lives."

— Dr. Matthew Miller, Executive Director of VA's Office of Suicide Prevention

Promising solutions are already beginning to make an impact for Veterans. Six of the most developed solutions have been implemented within VA. One finalist, Early Alert, is currently piloting its program at VA, with the goal of later expanding Veteran access to the innovation. Using Veterans' responses to proactive, weekly check-ins via text, Early Alert identifies Veterans in early distress and immediately activates VA and community support resources, including the Veterans Crisis Line (VCL).



> "What we're focused on in training is ensuring that knowledge translates to behavior. It's not enough to have the skills, you need to be able to put them to use. And having a wide range of realistic training simulations is an invaluable piece of that process."
>
> *—Veterans Crisis Line employee*

Secure firearm storage startup Vara Safety, another Mission Daybreak finalist, has developed the prototype for its winning innovation. The team used the award money to bring their smart gun safe from concept to reality, and they are working to incorporate Veteran feedback before they bring their product to market. The smart safe is opened via a mobile application and Veterans can choose to limit their access to their safe for a period of time or enable a feature that requires approval from a trusted person also using the app. The "Reminder" feature is an additional safety mechanism that shows photos of a Veteran's loved ones and messages of support every time the safe is opened. Veterans are able to maintain control over their firearms while leaning on the support of their community and putting time and distance between themselves and their firearms during periods of crisis.

Judging panel along with team members from VHA's Innovation Ecosystem, Office of Mental Health, and Office of Suicide Prevention at the 2022 Mission Daybreak Demo Day.

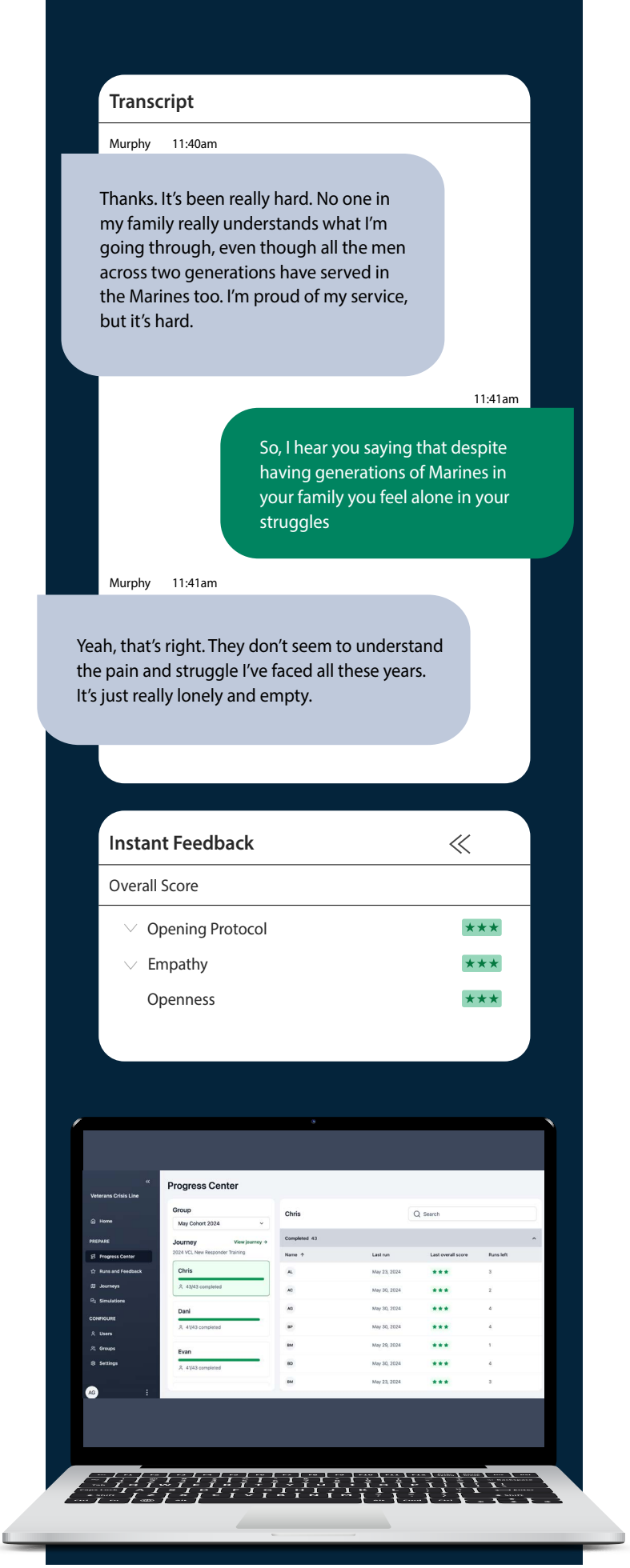
ReflexAI Leverages Artificial Intelligence for Crisis Intervention Training

Mission Daybreak finalist ReflexAI is using artificial intelligence (AI) technology to improve VA's safe crisis intervention strategies. Since 2007, VCL has been providing phone, text, and online chat support to Veterans in crisis. A growing team of trained crisis responders has answered over 9 million calls, chats, and texts to date, as well as issued over 1.6 million referrals to local VA suicide prevention coordinators.

As VCL actively expands its operations to meet Veterans' needs, VA is ensuring crisis line staff members are ready to effectively respond to the many scenarios they face daily. ReflexAI, which uses an AI program for simulated crisis line scenarios, offers a new way to train these essential employees as a supplement to the world-class training responders already receive. ReflexAI co-founders Sam Dorison and John Callery-Coyne configured a conversational software program that looks and acts just like a VCL online chat conversation. However, instead of a Veteran typing on the other end, VCL staff are engaging with a realistic AI simulation. One VCL training leader said, "We've never been able to see data like this in training, so it helps to see it this way to see how this group is improving."

The training program has eight simulated AI "personas," each of which responds differently to trainees based on the configured motivations and crises they were provided. The ReflexAI team refined these personas in collaboration with VCL leadership to reflect the diverse demographics and personal experiences of those calling in. As a training tool for VCL staff, ReflexAI is not used directly with Veterans or their families. In May, ReflexAI simulations were integrated into VCL New Employee Orientation training, and will also be integrated into additional VCL trainings launching later this year.

"What we're focused on in training is ensuring that knowledge translates to behavior," one VCL employee said. "It's not enough to have the skills, you need to be able to put them to use. And having a wide range of realistic training simulations is an invaluable piece of that process." Results from the first round of training are already demonstrating this knowledge translation. VCL responders showed a 40% improvement in performance across all simulations in certain critical areas, such as conducting a successful risk assessment.



Members of Navajo Nation pictured in front of the Navajo Code Talker Monument a tribute to Navajo Code Talkers who transmitted coded messages for the U.S. military during World War II.

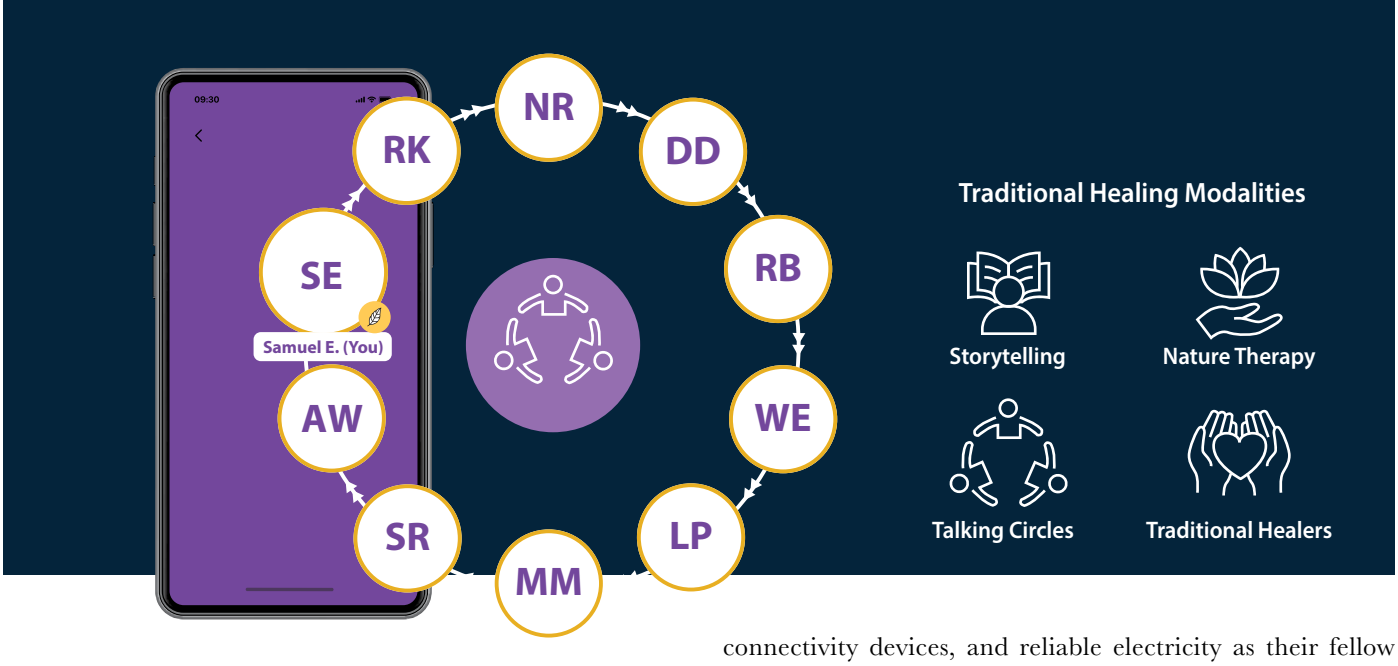
Bringing Back Traditional Practices Through Technology

American Indian and Alaska Native (AI/AN) Veterans serve their country at one of the highest rates per capita of any ethnic group. However, these communities are among the most vulnerable to suicide, and VA recognizes the need to tailor prevention and intervention services to these and other vulnerable groups.

One of Mission Daybreak's first place winners, Televeda, is supporting the development of a web-based suicide prevention solution to promote connection and community healing for AI/AN Veterans and Tribal communities through accessible healing practices. Their solution is called Hero's Story. This community platform will eventually host multiple traditional healing practices but has launched its app with one of the oldest and most inclusive methods: talking circles. Provided for free to any AI/AN Veteran, Hero's Story creates an accessible space for Veterans to join safe, structured discussions through storytelling, virtual talking circles, community healing, and personalized interventions.

The user interface was designed to mimic elements of in-person talking circles. Veterans are arranged in a circle on the screen, a digital token is passed around to indicate which Veterans can speak, and low-tech interfaces are available to allow elders with limited tech literacy to participate. The app enables secure streaming, with strict privacy and data protections that prevent audio-video recordings and allow for full anonymity. The privacy controls allow Hero's Story to offer virtual talking circles for LGBTQ+ and women Veterans, creating safer spaces for expression. The app also connects AI/AN Veterans with VA resources, such as VCL and online benefits enrollment, that can provide long-term support and intervention services.

Hero's Story works closely with members of Tribal nations, including the Lakota, O'odham, and Navajo. After a full year of building trust, capacity, and knowledge, the Televeda team partnered with the Navajo Nation to move forward with the first phase of Hero's Story. In May, Mission Daybreak



lead Dr. Amanda Lienau joined Televeda, the Navajo Nation, and nearly 200 Diné Veterans in Window Rock, Ariz. for the formal launch and community-building event. At the event, the Navajo Nation Veterans Administration (NNVA) announced an exciting expansion to Televeda's virtual work—a new collaboration that will enable in-person talking circles at NNVA facilities, led by the same trauma-informed facilitators that run the virtual circles. The team also met with President Buu Nygren of the Navajo Nation, whose office has expressed support for the work.

Looking forward, Televeda is committed to improving digital equity for Navajo Nation communities in Arizona. Veterans in rural areas who benefit most from virtual social connection may not have the same access to the internet, connectivity devices, and reliable electricity as their fellow Veterans in larger cities. Additionally, Televeda is exploring opportunities to expand to New Mexico and begin reaching out to Native Veteran communities there, with the same goal that brought their team to Mission Daybreak two years ago: preventing Veteran suicide.

Mission Daybreak is supporting innovative solutions that meet Veterans where they are and reflect the diversity of the Veteran population as they offer healing and recovery to all Veterans. Suicide has no single, cause and ending Veteran suicide requires a diverse, community-based, and urgent approach. As Mission Daybreak builds its support for these preventative solutions and looks ahead to deepened impact, follow along by subscribing to the Mission Daybreak newsletter and visiting the Mission Daybreak website.

Navajo Nation President Buu Nygren pictured with Dr. Amanda Lienau.

Click here or learn more about Mission Daybreak on page 78!

Leveraging Technology for Social Connection and Support

Innovations in Addressing Loneliness and Isolation

83%
of Veterans surveyed said Compassionate Contact Corps (CCC) visits help them feel less lonely

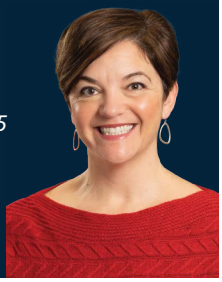
77%
said CCC visits increased their overall well-being

105+
VA facilities host CCC

1,000+
volunteers are serving with CCC and have spent **55,000** hours talking with Veterans and providing crucial support

"People who are more socially connected tend to have better overall health outcomes, lower mental health issues, and are better engaged in their communities."

— Lori Murphy,
Senior Social Worker at VA Central Ohio Health Care System and 2024 & 2025 VHA IE Entrepreneur in Residence Fellow



In 2023, the U.S. Surgeon General issued a Public Health Advisory declaring loneliness to be a public health epidemic. Isolation and loneliness are more than just feelings; they are serious public health problems with far-reaching consequences. These feelings can worsen pre-existing physical and mental health issues and, most seriously, increase the likelihood of thoughts of suicide, especially in Veterans. A 2022 VA study found that elevated risk of suicide is strongly related to social determinants of health (SDOH), such as loneliness. SDOH are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

Lori Murphy, a Senior Social Worker at VA Central Ohio Health Care System and 2024 and 2025 VHA IE Entrepreneur in Residence Fellow, is spearheading efforts to develop an integrated resource management tool called **SDOH Information Exchange Referral Platform (IERP**). This platform is designed to reduce barriers in social connection innovation, evaluate SDOH's to reduce social isolation, and build upon VA's work to address loneliness. "People who are more socially connected tend to have better overall health outcomes, lower mental health issues, and are better engaged in their communities," says Murphy. "They have better civic engagement, improved relationships, and are more engaged in their healthcare."

Murphy's motivation to develop IERP was partly inspired by her significant success with a program she initiated at VA Central Ohio Health Care System known as Compassionate Contact Corps (CCC). CCC connects volunteers, often Veterans themselves, with Veterans for weekly social connection phone calls. CCC participants have seen incredible results. In March 2021, 83% of surveyed Veterans said the visits helped them feel less lonely, and 77% said it increased their overall well-being. Initially launched in 2020 at eight VA facilities, CCC has now reached over 105 VA facilities with over 1,000 volunteers serving 55,000 hours talking with Veterans and providing crucial support to Veterans experiencing loneliness.

The SDOH IERP will provide a secure referral system through which VA employees can refer Veterans to specific, vetted, community-based health providers and resources. The technology-based platform will show VA employees which programs the Veteran is eligible for, make referrals, and indicate when those community organizations contact the Veteran to initiate the referral and follow-up. This provides Veterans with a more streamlined system for VA employees to connect with their community partners addressing SDOH.

"Currently, the processes for VA employees to connect Veterans with community resources are inefficient and ineffective, and there is a desire for national coordination of resources that offers the flexibility to also include community-level services," said Murphy. "VA can't do it alone. By collaborating directly with community providers, non-profits, and Veteran serving organizations within the platform, VA employees can feel confident that they're providing the highest level of support to Veterans, their families, and caregivers while trusting that the community providers are taking those Veterans into their care." Shared data from the platform would provide insights into what contributes to health disparities and inequities, and which resources contribute to improved health outcomes for Veterans.

Veterans interested in social connection resources may talk to their VA primary care provider. To begin receiving CCC calls, please contact your VA primary care provider or social worker to request a referral. If you would like to volunteer, contact your local VA Center for Development & Civic Engagement.

Click here to learn more about Volunteering with VA or visit page 78!

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Social Isolation Meets Its Match in Veterans Socials

A Blueprint for Building Stronger Veteran Communities

In a national sample of over 2,000 Veterans, 52% reported inadequate social support as a barrier to seeking help when having thoughts of suicide. Social isolation, loneliness, and disconnection from the community can have negative health impacts for Veterans. However, there is much that can be done to help Veterans prevent social isolation by forming connections and creating support networks. Helping Veterans to build their social support system is not only critical to enhancing their overall health, but plays a role in mental health and suicide prevention, as having more social support decreases the risk for suicide.

To help combat social isolation among Veterans, Dr. Jay Gorman, Clinical Researcher at the VISN 1 Mental Illness Research, Education, and Clinical Center (MIRECC) at VA Bedford Healthcare System, has been supporting the scaling of a social connection program called **Veterans Socials** nationwide. "One in three people report being lonely on a weekly basis and, in some parts of the Veteran population, it is more," says Dr. Gorman.

Veterans Socials evolved from a weekly meeting that began in 2012 when a group of Veterans at VA Bedford recognized the positive impact the social gatherings had on combating loneliness. Socials offer connection opportunities to Veterans who may be struggling with the transition to civilian life or grappling with mental health challenges. After two years, participating Veterans noticed the lasting relationships that were being built through this meeting and decided to expand to the broader community. Dr. Gorman noticed the growth of this program and joined the effort to help scale Veterans Socials nationwide, later making it the focus of his 2024 VHA IE Entrepreneur in Residence Fellowship.

Veterans Socials

- Strengthens Social Connections
- Increases Knowledge of VA Healthcare Services
- Engages Communities of Supporters and Organizations

iStock/Mapodile

Veterans Socials operates on a peer-led model with Veterans or VA Peer Specialists hosting each gathering. The presence of VA Peer Specialists helps to reduce the stigma many Veterans feel in seeking help and promotes access to VA healthcare resources they may need. Socials often gather weekly for 90 minutes and exist to strengthen social connection between Veterans, increase access to and knowledge of VA healthcare services, and engage communities of Veteran supporters and organizations. While Veterans make up the core of most Socials, many gatherings are co-hosted with local organizations.

Anyone who has served can start their own Veterans Social and make a difference in their community. By fostering social connection at the grassroots level, organizers can collectively combat the epidemic of loneliness among Veterans. The flexibility of these socials ensures that they cater to the diverse needs of the Veteran population, whether it is through gaming-focused events, collaborations with senior centers for retired individuals, or weekly gatherings at the local bowling alley. "A strength of Veterans Socials is that they can be customized to meet local needs," said Dr. Gorman. "They can be molded and adapted to serve the preferences of any community. Socials are intended to leverage the power of Veteran-to-Veteran connection and enable Veterans Socials hosts and organizers to increase the capacity of their community to serve Veterans where they live." Of Veterans Socials attendees, 75% reported meeting with other attendees for social activities outside of the weekly socials at least once per month.

After six years of service, Jess, a U.S. Air Force Veteran, grappled with a profound disconnection upon leaving the service. She discovered Veterans Socials and found comfort in the weekly meeting with her fellow Veterans. This environment allowed her to share at her own pace, fostering a supportive network that gradually became her lifeline. She eventually joined other attendees for events outside of the socials.

Jess found friends and trusted the VA Peer Specialist who encouraged her to seek mental health treatment and then stick with it when things got hard. Through this transformative experience, Jess then became a Peer Specialist, driven by a passionate commitment to prevent others from experiencing the disconnection she once endured. She co-authored the manual that, as of September 2024, helped Veterans Socials spread to over 100 locations spanning 22 states.

"We have data that suggests that 41% of Veterans that attend Veterans Socials do not use VA services, but about one in four of those Veterans eventually becomes connected to VA," says Dr. Gorman. "As Veterans navigate the complexities of mental health and social well-being, initiatives like these remind us that together, we are stronger."

A Quick Start Guide was developed to help those who are interested in starting with Veterans Socials. It includes a step-by-step guide on how to establish and host a social in the community. Further, the Veteran Outreach Into the Community to Expand Social Support (VOICES) team can provide consultation, coaching, and other resources that facilitate the organizational process to start Veterans Socials.

There are over 100 Veterans Socials locations across the Nation. Click here to learn more or visit page 78!

"As Veterans navigate the complexities of mental health and social well-being, initiatives like these remind us that together, we are stronger."

— Dr. Jay Gorman, Clinical Researcher at the VISN 1 Mental Illness Research, Education, and Clinical Center (MIRECC) at VA Bedford Healthcare System

Pioneering Peer Social Support

A New Reality in Veteran Healthcare

Thousands of Veterans are experiencing social isolation, placing them at increased risk of mental health issues, difficulty transitioning to civilian life, diminishing physical health, substance abuse, employment struggles, and homelessness. Veterans in these situations can also have trouble accessing VA resources and organizations that would improve their quality of life.

As a response, VA has turned to innovative solutions to help Veterans connect socially with other Veterans. One example of these solutions is virtual reality (VR) platforms that offer opportunities for 24/7, on-demand social connection to help cultivate the camaraderie that is familiar and important to Veterans and service members. "We know that loneliness and social isolation affect so many Veterans, and that's not unique to Veterans," explains Dr. Anne Lord Bailey, VA Immersive Lead and Executive Director of VHA Digital Health Office's Strategic Initiatives Lab. "By identifying, testing, and evaluating VR-based platforms, we have the opportunity to increase avenues for social engagement. Truly, what brought this collaboration to life was learning that Veterans were already utilizing virtual peer social support platforms like this one. It's about meeting Veterans where they are, providing them with a variety of options, and making it as easy as possible."

"Innerworld quickly gave me a sense of belonging, similar to what I had in the military. I'd highly recommend it to anyone who is struggling with their mental health and just needs a judgement-free, safe place to meet new people and connect with those who have had similar experiences."

—Veteran Platform User

In one such effort, the **Peer Social Support** pilot, VA is conducting a year-long evaluation of a VR-based platform, Innerworld. The pilot will assess the program's impact across at least 10 VA facilities, as well as an additional program supporting Veterans who have never enrolled in VA. Through this collaboration, at least 100 Veteran volunteers who are already utilizing Innerworld on mobile devices will be given VR headsets to help evaluate the difference in engagement between 2D and immersive systems. Also, VA Immersive and Innerworld will work together to develop and then provide training for VA providers who are offering VR headsets to Veterans, focusing on effectively supporting the use of the virtual platform.

One Veteran shared their experience using the platform, saying, "Innerworld quickly gave me a sense of belonging, similar to what I had in the military. For anyone who is struggling with their mental health and just needs a judgement-free, safe place to meet new people and connect with those who have had similar experiences, this platform provides that."

Click here or learn more about Peer Support Platform on page 78!

Innerworld creates a supportive environment for Veterans using advanced VR technology and Cognitive Behavioral Immersion (CBI), the science behind many of the innovative solutions that address social isolation. Innerworld provides dedicated spaces where Veterans, typically using anonymous avatars, can spend time together talking and supporting each other.

Noah Robinson, CEO and co-founder of Innerworld, highlights the dual benefits of the platform: "Veterans come looking for a refuge to escape a little bit, but while they're escaping, we're teaching them tools that they can use to come back to reality more empowered than they left it. The Veteran community events we have are some of our best-attended each week."

The Innerworld collaboration highlights VA's ongoing commitment to defining a new reality in healthcare delivery through immersive technology like VR. Veterans interested in exploring Innerworld can inquire at their local VA facility or reach out to VAImmersive@va.gov. Innerworld is currently free to all Veterans and can be accessed on a VR headset, mobile device, or desktop computer.

Personalized Lockbox Reminds Veterans of Their Reasons for Living

Lockbox Combines Sensory Experiences with Meaningful Reminders to Offer Hope and Support to Veterans in Crisis

Firearm suicide deaths made up 72% of overall Veteran suicides in 2021. Increasing the time and distance between a person with thoughts of suicide and their access to lethal means can reduce their suicide risk and potentially save their life. These preventable deaths, and the limited options to stop them, led Carl LoFaro, a U.S. Army Veteran and mental health professional, and Natalie Thomas, the daughter and partner of combat Veterans, to work together to create a new tool for Veterans at risk of suicide.

LoFaro, Community Engagement and Partnership Coordinator at VA Hudson Valley, and Thomas, a VA Performance Improvement and Data Analytics Coordinator, looked to leverage Veterans' often-cited reasons for living by developing the **My Reasons for Living Lockbox (Lockbox)**. As a preferred lethal means safety device, this unique storage case uses personalized reminders targeting all five senses of a Veteran's reasons for living to inject hope into moments when a Veteran is in crisis. "Our guiding question is: How can we create a tool for a Veteran at high risk of suicide to choose life?" said LoFaro.

The Lockbox is meant to supplement existing suicide prevention and lethal means safety resources provided by VA, such as individual and group therapy, residential treatment, and the over 852,000 free gun locks distributed to Veterans and their families since 2008.

"Some days everything seems gray, everything seems just too hard to keep going. Even though I am careful to take my medicines and keep up with my appointments, sometimes I just feel nothing. And nothing is so overwhelming sometimes. I need a reminder of all the little things that keep me going that turn into the big things that are so important to live for. This Lockbox will save the lives of people like me who struggle to find reasons to keep going."

—Anonymous Veteran

iStock/Rawpixel

The outside of the Lockbox features a list of three people the Veteran can call in a crisis before opening the box, in addition to the Veterans Crisis Line. When the Lockbox opens, the Veteran is presented with a series of sensory experiences, such as a personalized recording from a loved one that plays on a loop for several minutes and is difficult to turn off. They are also presented with a nested tray holding sentimental items that they have assembled for themselves such as photos, mementos, favorite snacks, and scents that remind them of their reasons for living. To reach the area of the Lockbox where the firearm is stored, the Veteran would then need to remove the tray, potentially creating a critical moment of hesitation.

In 2022, LoFaro and Thomas applied and were accepted into the VHA Innovators Network's Go Fish program, which matched them with Innovation Specialist Katie Braun from VA Pittsburgh and provided them with tools, training, and mentorship to aid the design and development of the Lockbox. To inform the design of the Lockbox, they gathered input and feedback from Veterans at a range of points in their mental health recovery. Veteran insights led to refinements such as a larger font for exterior information and more ways to incorporate different senses.

This iterative process has helped tailor the Lockbox to the specific needs of Veterans, making it a powerful tool for managing their mental health and preventing suicide. Even in its early stages, the Lockbox's life-changing capabilities have impressed Veterans. "Some days everything seems gray, everything seems just too hard to keep going," said one Veteran. "Even though I am careful to take my medicines and keep up with my appointments, sometimes I just feel nothing. And nothing is so overwhelming sometimes. I need a reminder of all the little things that keep me going that turn into the big things that are so important to live for. This Lockbox will save the lives of people like me, who struggle to find reasons to keep going."

Veterans may also use the effort of personalizing their Lockboxes with items as an opportunity to engage with loved ones and have meaningful conversations about mental health. Even though the Lockbox is a personal item, it may provide great potential for connection, reinforcing the Veteran's external support system and addressing feelings of isolation. "We've seen that this can serve as an opportunity for Veterans to open up about their mental health challenges with their loved ones and brainstorm what kinds of things might be fitting to put in the Lockbox," said Thomas. Now in the final stages of prototype development, LoFaro and Thomas are working to license and patent the Lockbox and will begin making it available to Veterans at other VA facilities, providing Veterans with a powerful tool to reinforce their mental health and resilience.

DELIVERING MORE TOGETHER

COLLABORATION IS THE NEW COMPETITION

VA is committed to providing Veterans with the soonest and best care, regardless of where they live, their age, or their gender. This was VA's largest enrollment year ever, including a record number of enrolled women Veterans. An increase in enrollment means an increased and expanded demand for VA services. To meet these needs, VA is developing innovative programs to enhance care and expand access like digital health and remote monitoring platforms, resources that empower Veteran caregivers, and tools to help Veterans and VA employees prevent and reduce the harmful effects of drug use.

This section features these programs, and the VA innovators, that have expanded access to care and services, and fostered increased trust among Veterans, their families, and their caregivers.

Engaging Veterans Service Organizations

Veteran Voices Guiding the Future of Innovation

VA is steadfast in its mission to care for those who have served in the Nation's military, as well as their families, caregivers, and survivors. This mission is enabled and accelerated through a community approach. VA relies on critical collaborations with industry, academic institutions, non-profits, and government agencies as force multipliers to reach more Veterans.

Central to these collaborations are **Veterans Service Organizations (VSOs)**, which represent the Veteran perspective and ensure VA keeps a pulse on Veterans' most pressing needs. VSOs are the eyes and ears within every community where Veterans live, work, and thrive. VHA's healthcare innovation efforts are focused on ensuring that Veteran feedback shapes the development of innovations as they are refined, and eventually integrated more broadly into Veteran care.

VHA IE's IDEAS Center for Innovation, based at the Central Virginia VA Health Care System (CVHCS), specializes in providing world class care to Veterans with spinal cord injuries and disorders (SCI&D). CVHCS' extensive work with this population makes a natural collaborator in the Paralyzed Veterans of America

CVHCS SCI team members at a 2023 Breast Cancer Walk.

(PVA), a VSO that represents Veterans with spinal cord injuries and other neurological disorders.

During the pandemic, when Veterans with SCI and VA employees were isolated and without the usual support and connections of the SCI community, the very connections that help them both thrive became even more critical. A group of VA employees had an idea and reached out to the Mid-Atlantic PVA, including National Service Officer Chris Custer and Executive Director Ivan Swartz, to address this growing need. Their objective was to acknowledge, support, and promote wellness among Veterans, employees, and family members in the SCI community.

The SCI Integrated Patient and Staff Wellness Program began in 2021 with small gestures that were overwhelmingly appreciated. It has since expanded to a structured and purposeful program to include informative, healthy, and fun events and activities throughout the year. These include semi-annual wellness fairs, healthy cooking competitions, tai chi and yoga, and other social wellness activities.

"We've seen more and more engagement from our employees, Veterans, families, and caregivers with each event, and our data shows that engaging, interacting, and supporting each other is the best medicine we offer," said Dr. Cathy Williams-Sledge, a Psychologist at CVHCS. "Working with the Mid-Atlantic Chapter of PVA has made it easy to maintain focus on our goal caring for Veterans and those who care for them."

VHA recognizes the role Veterans and VSOs play in shaping the future of Veteran healthcare and this year established an award to honor collaborations like the one happening between CVHCS and PVA's Mid-Atlantic Chapter. The Garry J. Augustine VSO Collaboration Award is designed to honor VHA employees or teams who leverage innovative collaborations with VSOs to positively impact the care, services, or experiences at VA facilities.

Garry J. Augustine, a combat-wounded Vietnam Veteran, dedicated his life to advocating for Veteran care and benefits. A 50-year life member of Disabled American Veterans (DAV), Augustine served as the National Service and Legislative Headquarters executive director in Washington, D.C. "He felt so strongly that he benefited so much from his time at VA and all the rehab and support that they gave him that he needed to spread the word," said Chelsea Canning, Augustine's daughter. "This award is a monumental way to honor the work he did and to encourage other members of the Veteran service community to continue on for Veterans."

Naming the award after Garry J. Augustine honors his legacy of service and his commitment to fostering collaboration between VA and VSOs. The award will inspire more VA employees and teams to seek out and engage in meaningful collaborations with VSOs, ultimately enhancing the care and services provided to Veterans.

Garry J. Augustine, U.S. Army Veteran and lifelong Veteran advocate.

Click here or learn more about engaging with your local Veterans Service Organizations on page 79!

Breaking Barriers

VHA-Uber Health Connect Initiative

Every step counts along a Veteran's healthcare journey. For many Veterans, this journey has been obstructed by a significant hurdle: lack of access to transportation. Every year, transportation barriers result in 1.8 million missed VA medical appointments, costing VA nearly $4.4 billion annually and reducing Veterans' overall health outcomes. To address this challenge, VA collaborated with Uber Health to establish the **VHA-Uber Health Connect (VUHC) Initiative** which offers Veterans a supplemental rideshare transportation option to get to and from their medical appointments. The VUHC Initiative has reshaped the landscape of healthcare access for Veterans.

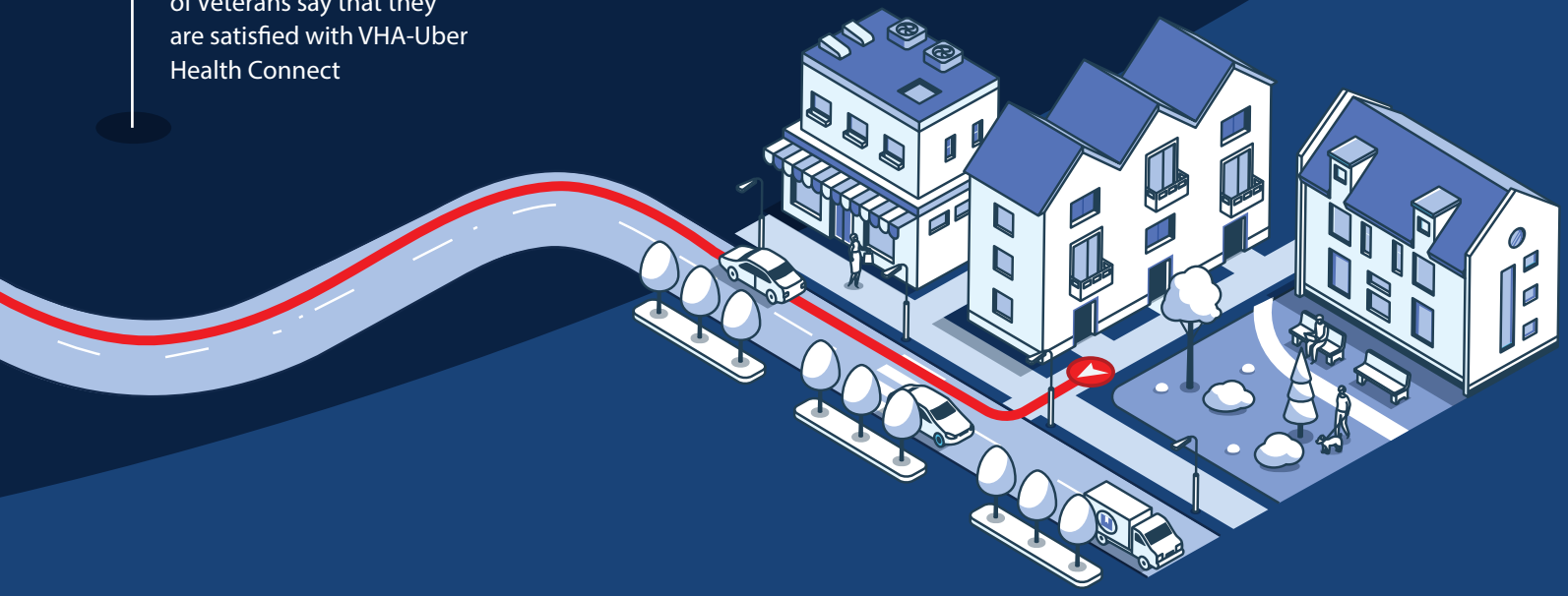
Launched in January 2022, the VUHC Initiative set out with ambitious goals: reduce missed appointments, improve the Veteran experience, and achieve cost savings for VA. The initiative was spearheaded by Dr. Indra Sandal, Chief of Innovation at James A. Haley Veterans Hospital, VA Tampa Health Care System, and catalyzed by VHA IE, Veteran Transportation Program (VTP), and Uber Health. To supplement VA's existing Beneficiary Travel Program, the VUHC Initiative offers rideshare services to Veterans, integrating Uber Health's HIPAA-compliant platform into VA's healthcare system. Now, VUHC is available at over 100 VA facilities.

The VUHC Initiative's impact speaks for itself: 263,000 rides completed, 38,000 Veterans served, and 4 million miles traveled between January 2022 and March 2024. The initiative has helped more Veterans get to their

90%
of Veterans would recommend VHA-Uber Health Connect to another Veteran

83%
of Veterans say that without VHA-Uber Health Connect, they would have missed their appointment

89%
of Veterans say that they are satisfied with VHA-Uber Health Connect



medical appointments and has led to an estimated $196.7 million in cost savings for VA. Veterans reported high satisfaction rates, many stating they would have missed their appointments without the rideshare service.

From a transplant patient in Pittsburgh to a blind Veteran in Phoenix, the VUHC Initiative has been a tremendous help, providing reliable transportation and increasing access to care. One Veteran in Gainesville, Fla. expressed deep gratitude, saying, "Thank you very much for the Uber transportation, without it I would have no other way to get to my appointments." Another Veteran in New York shared: "This Uber program allowed me to make my dialysis appointments across town and on Saturdays when I didn't have another way to get there."

As of May 1, 2024, VTP is providing all VA facilities the option to use rideshare services for Beneficiary Travel-eligible Veterans. This expansion marks a significant milestone, ensuring that eligible Veterans nationwide can benefit from this solution. Local facilities will manage their rideshare programs with ongoing support from the VTP national team. The VUHC Initiative is a testament to the power of public-private collaboration and innovation to overcome barriers and enhance Veteran care. Eligible Veterans needing access to and from medical care may contact their primary Beneficiary Travel point of contact to learn more about the VUHC Initiative at their facility.

Click here to view your Beneficiary Travel Point of Contact or visit page 79!

Dr. Sandal pictured with leaders from VTP, VHA IE, and James A. Haley Veterans Hospital and Clinics.

Shannon Lightfoot, U.S. Army Veteran, uses a VR headset.

Virtual Relief

Revolutionizing Veteran Chronic Pain Management With VR Headsets

Chronic pain is the leading cause of disability among Veterans, and up to 70% of Veterans are affected. The physical and mental toll of chronic pain often leads to a heavy reliance on medications, including opioids. VA has a comprehensive, system-wide approach to pain management that includes developing and disseminating state-of-the-art treatments. One of the latest interventions is a virtual reality (VR) program through which Veterans can learn different pain management techniques in short, daily doses, from the comfort of their homes. This technology enables Veterans to learn how to independently manage their pain through structured sessions that can decrease levels of reliance on pharmaceuticals.

Additionally, chronic pain is not just a leading cause of disability—it is also a significant risk factor for other severe outcomes. VA Behavioral Health Autopsy Program data from 2019 to 2021 indicated that pain was the most frequently identified risk factor in suicide deaths among Veterans, found in 55.9% of cases. This troubling statistic highlights the critical need for effective pain management strategies that address both the physical and psychological aspects of pain.

The **Virtual Reality-Based At-Home Chronic Pain Management** initiative demonstrates the power of effectively working together across VA.

Veterans in Indianapolis using VR programs for pain management.

This collaboration between VHA Digital Health Office's Strategic Initiatives Lab and VA's Pain Management, Opioid Safety, and Prescription Drug Monitoring Program (PMOP) has demonstrated promising improvements in Veterans' ability to manage pain.

Through this effort, Veterans use a VR headset to access a product authorized by the FDA to be marketed as a treatment for chronic lower back pain. This device includes an eight-week curriculum inclusive of cognitive behavioral therapy techniques in different, engaging environments that enable Veterans to learn practical pain management skills in daily six–seven-minute sessions. The environments may include activities like deep breathing exercises, relaxation, pain neuroscience education, or mindfulness-based practices.

"It is really about increasing access and better engaging our Veterans with their pain management," says Caitlin Rawlins, Director of Clinical Tech Innovation and VA Immersive Program Manager. "As a supplement to all of the other great VA pain management offerings, we're now providing access to an engaging technology Veterans can use independently at home. The technology allows Veterans to learn and practice skills daily inside the VR environments, which then helps them better self-manage their pain outside of the headset." The headsets do not require Wi-Fi connectivity and can be shipped anywhere, making them accessible to Veterans in remote locations.

Dr. Melissa Echevarria Baez, National Telehealth Program Manager of PMOP, noted "Nonpharmacological interventions that promote the use of active self-management strategies and lead to improvements in Veterans' well-being and quality of life, not only serve to empower those living with chronic pain but are also essential for long-term success and sustainability of positive outcomes."

Feedback from Veterans and VA employees has validated the program's efficacy and indicates new possibilities for Veterans to gain control over their pain management. Almost 750 Veterans have been enrolled through this pilot thus far and have reported significant improvements related to pain interference with daily activities and quality of life, as well as sleep, anxiety, and physical function. "Using the VR headset, I've learned ways to manage my pain that I can use anytime," shared one Veteran. "It's been life-changing."

Steven Gilbert, U.S. Air Force Veteran, explores virtual reality with his headset.

Click here to learn more about VR Chronic Pain Management on page 79!

Saving Veteran Lives

Defibrillator Simulator Helps Close Training Gap

Every second is critical after a heart stops beating correctly. Medical providers must rapidly obtain and use a defibrillator on patients experiencing an arrhythmia or code event, but some lack confidence due to limited training opportunities. Defibrillators are medical devices that apply an electric charge to the heart to restore a regular heart rhythm. Healthcare providers, including those at VA facilities, are required to maintain advanced cardiovascular life support (ACLS) certifications so they can use defibrillators. This makes staying proficient with the defibrillator an overlooked but common challenge.

Dr. Michael Kazior, an Anesthesiologist and Critical Care Physician at the Central Virginia VA Health Care System (CVHCS), recognized that for anesthesiologists and other ACLS providers both within and outside VA, training opportunities were scarce, thus leaving many providers out of practice with a defibrillator. However, there are few in-person opportunities for providers to train with defibrillators due to limited time and a lack of educational resources. To address this gap, he set out to develop an online defibrillator education module designed not only to teach the use of defibrillators, but also to reinforce that skillset over time.

The **Defibrillator Simulator** is an online simulation offering accessible training and continuous education on defibrillator use. The module allows ACLS providers to learn and practice using a virtual

version of a defibrillator that walks them step-by-step through applying the device in a real-world situation. It instructs ACLS providers on the three primary functions of a defibrillator—cardioversion, defibrillation, and pacing—and the correct placement of defibrillator pads. This interactive application assesses users' baseline knowledge, guides them through instructional modules, and provides post-training evaluations to test their understanding of the defibrillator. When VA providers have better access to training and can maintain the knowledge they have accrued, healthcare outcomes for Veterans improve.

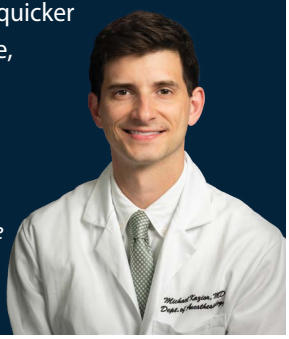
To bring his vision to life, Dr. Kazior collaborated with VHA IE's IDEAS Center for Innovation at CVHCS. The prototype received additional support through VHA IE's Innovators Network Spark-Seed-Spread program, culminating in a first prototype in October 2023. Once the educational content was established via a paper prototype, Dr. Kazior collaborated with the University of Florida's Center for Safety, Simulation & Advanced Learning Technologies (CSSALT) to build the first functional prototype. "We hope this online simulation can foster confidence among ACLS providers, enhancing the quality of care we can offer. The quicker we can effectively use this device, the better the outcomes for our Veterans," stated Dr. Kazior.

Click here or visit page 79 to learn more about Defibrillator Simulator!

Now, Dr. Kazior and the IDEAS Center are collaborating with the Anesthesia Patient Safety Foundation (APSF), a non-profit dedicated to improving anesthesia care and preventing patient harm, to improve the simulation further and make it accessible to all ACLS providers, not just those within the VA system. As the Course Director, Dr. Kazior will continue providing clinical guidance and oversee the expansion of the training.

"We hope this online simulation can foster confidence among ACLS providers, enhancing the quality of care we can offer. The quicker we can effectively use this device, the better the outcomes for our Veterans."

—Dr. Michael Kazior, Anesthesiologist and Critical Care Physician at the Central Virginia VA Health Care System (CVHCS)



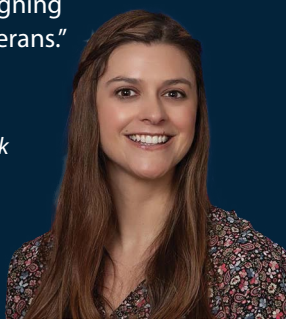
VA-Developed Healthcare Products Deliver Market Value

Turning Clinical Insights Into Practical Solutions

VHA IE's Innovators Network (iNET) and VHA Office of Research and Development's Technology Transfer Program (TTP) support the work of creative VA employees who develop solutions that enhance Veterans' care and quality of life. iNET is a community of employees united by a desire to solve healthcare problems. Across the Nation, iNET is funding innovative employee ideas, even helping some to reach the point of patenting. TTP, a program in VHA's Office of Research and Development, assists VA employees in commercializing VA inventions by providing support for patenting and licensing. This ensures that innovations developed within VA can reach a wider audience and generate revenue to support further research and development. Together, these programs are a dynamic duo striving to ensure that VA-developed innovations provide impact on healthcare in VA and beyond.

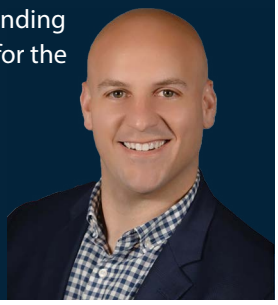
"The future of meeting Veterans' healthcare needs includes designing products for Veterans, with Veterans."

—Allison Amrhein, MPH, Director, VHA Innovators Network



"The VA Technology Transfer Program played an important role in commercializing these technologies by understanding the innovators' idea and vision for the technology..."

—Ryan Adam Davis, JD, Regional Director of the Midwest and New England Technology Transfer Office



Allison Amrhein, Director of iNET, emphasizes the core philosophy of iNET's employee spirit, stating, "The future of meeting Veterans' healthcare needs includes designing products for Veterans, with Veterans." In 2023, iNET launched the **VA Intrapreneurial Product Marketplace (VAIPM)** to showcase these innovative products, bridging the gap between ideas developed by VA providers and their practical implementation across VA. VAIPM guides the healthcare industry on purchasing these employee-designed products at VA facilities and in the private sector nationwide. The products featured on VAIPM owe their existence to the support of iNET and TTP, which provide support ranging from prototyping to commercialization. Ryan Adam Davis, JD, Regional Director of the Midwest & New England Technology Transfer Office, said, "The VA Technology Transfer Program played an important role in commercializing these technologies by understanding the innovators' idea and vision for the technology, building a patent portfolio around the inventive concepts, and partnering with industry to plan the final steps of commercialization and negotiate a fair return on investment for VA."

The collaborative success of these programs is exemplified by the recently licensed Hinged Tub Transfer Bench. Randall Wesley, a Physical Therapist at Chicago's Jesse Brown VA Medical Center, saw an opportunity to improve Veterans' quality of life and was inspired to develop a product that enables Veterans with mobility issues to bathe safely while maintaining their independence. "A Veteran told me that he was getting into the tub by sitting on the lip of the tub and swinging his legs over. While that technique is unsafe, it gave me the idea that the lip of the tub could support a person's weight. I see how challenging daily tasks can be for Veterans with disabilities, and as a physical therapist, I drive myself to develop new products and techniques to make their lives easier," said Wesley. The Hinged Tub Transfer bench allows Veterans to safely transfer into the tub containing water, reducing the risk of falls and making the bathing process more discreet.

Another successful example is the Self-Leveling Walker, developed by VA Northeast Ohio Healthcare System employees Ronald Triolo, a Health Research Scientist, and Lisa Lombardo, a Physical Therapist. The Self-Leveling Walker addresses the limitations of conventional walking aids and the lack of options for teaching efficient stair ascent/descent maneuvers for Veterans in rehabilitation recovering from an injury. This product helps fulfill an unmet market need giving patients increased independence to safely navigate stairs and inclines while also minimizing the cost of home adaptations and extended stays in rehabilitation settings for training.

"As a physical therapist, the Self-Leveling Walker solves a lot of issues for so many of our Veterans. Stairs are always a challenge and so many people do not have the necessary handrails to safely negotiate stairs. The Self-Leveling Walker provides an easy, safe solution. This will allow our Veterans to go home sooner and not require expensive home modifications. Working with the engineering team to come up with a solution was very satisfying," said Lombardo.

The success of the Hinged Tub Transfer bench and Self-Leveling Walker, which are now licensed to private companies for commercialization, is yet another example of VA's commitment to innovation, Veterans, and healthcare globally.

Click here to view these products and more on VAIPM or learn more on page 79!

The Surgical Pause

Reducing Risks in Veteran Surgeries

Dr. Daniel Hall (center left) and Dr. Jason Johanning (center right) accept the 2024 John M. Eisenberg Award from Dr. Jonathan Perlin (left), President and CEO of The Joint Commission, and Dr. Dana Gelb Safran (right), President and CEO of the National Quality Forum.

For frail Veterans, making the choice to undergo necessary surgeries can be a complicated decision. Data demonstrates that Veterans considered "very frail" face a 10% higher 30-day mortality rate for low-stress surgeries compared to non-frail Veterans. The mortality rate for very frail Veterans six months after a surgical procedure demonstrates one in three frail Veterans will die within six months of even a minor surgery.

The **Surgical Pause Initiative (Surgical Pause)** has transformed VA's delivery of surgical care, ensuring Veterans receive the safest, most personalized, and optimized care. The Surgical Pause, led by Dr. Daniel Hall, a Surgeon at Pittsburgh VA Medical Center, and Dr. Jason Johanning, Medical Director of the Surgery Quality Improvement Program for VHA's National Surgery Office, addresses the critical need to assess and manage surgical risks for frail Veterans. Recognizing that even minor surgeries posed significant risks, they developed, studied, and improved the Risk Analysis Index (RAI), a tool that assesses Veteran frailty in just 30 seconds. If a surgical pause is triggered based on RAI score above a pre-determined threshold, the surgical teams engage with the Veteran to understand their health priorities, such as independence, hopes, and fears. For Veterans who choose surgery, plans can be tailored to optimize surgical outcome prior to surgery through physical therapy, nutrition, strength training, or home-based respiratory muscle training. The exercises can help frail Veterans manage the stress of surgery.

In its initial implementation at the Omaha VA Medical Center, the Surgical Pause reduced six-month mortality rates from 25% to 8%. Following the Surgical Pause's initial success at the Omaha VA Medical Center, the team set their sights on spreading the practice to additional facilities. In 2019, the Surgical Pause won VHA IE's Diffusion of Excellence VHA Shark Tank Competition. With the help of VHA's National Surgery Office, the Surgical Pause has reached over 50 VA facilities. "The Surgical Pause is about aligning our care with each Veteran's overarching life goals, ensuring the best possible outcomes," says Dr. Hall.

The success of this initiative is rooted in the collaborative efforts of various departments within VA and external organizations—like VA Surgical Quality Improvement Program, Safer Aging through Geriatrics-Informed Evidence-based practices (SAGE QUERI) Program, VA Center for Health Equity Research and Promotion, and VA Health Services Research & Development—demonstrating the power of teamwork in advancing Veteran healthcare. At the point of care in VA facilities, the Surgical Pause also requires collaboration across departments such as surgery, geriatrics, palliative care, rehabilitation, and nutrition.

This pioneering work has garnered national recognition, including the 2023 John M. Eisenberg National Level Innovation in Patient Safety and Quality Award from The Joint Commission and National Quality Forum. The success of the Surgical Pause exemplifies VA's commitment to innovative, Veteran-centered care. Veterans interested in learning more about the Surgical Pause and how it might benefit them should speak with their surgeon and VA care team.

Click here or visit page 79 to learn more about Surgical Pause!

HEALTHCARE ON THE HORIZON

ADVANCEMENTS IN CARE

VA is shaping the future of Veteran healthcare through its commitment to innovation. By continuously exploring and integrating the latest technologies and practices, VA provides Veterans with state-of-the-art care tailored their unique needs. These advancements improve the efficiency and effectiveness of healthcare delivery, enabling personalized care that can lead to better health outcomes for Veterans. Innovation ensures that the VA healthcare system remains robust and responsive in the years to come by addressing both current healthcare needs of Veterans and anticipating future challenges.

This section features innovations that explore the boundaries of wireless ultrasound technology and ambient dictation, pioneer precision medicine for personalized prescriptions, deliver 3D-printed dental solutions for Veterans, and enhance VA providers' abilities to respond to surgical emergencies and plan for complex medical procedures.

Ultrasound Technology Breakthrough

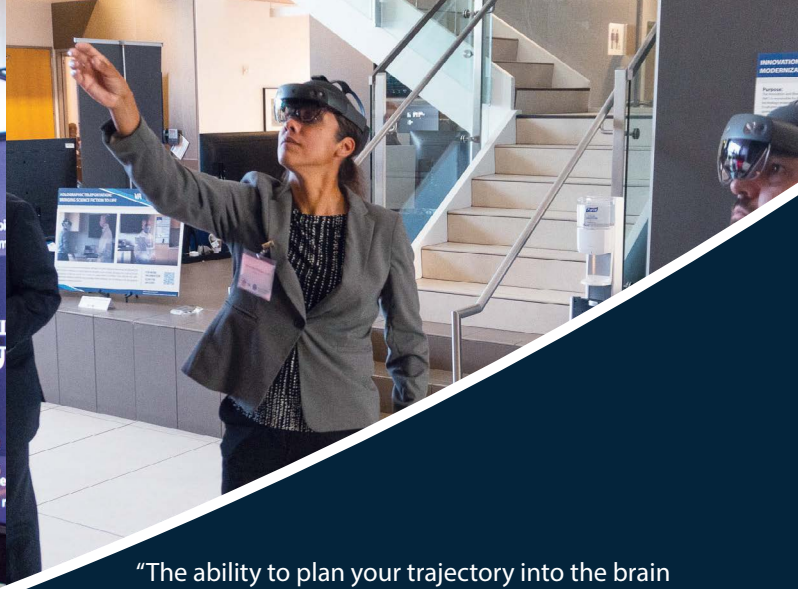
Advanced Tool Revolutionizes Medical Imaging

In the 1950's, Denver VA Hospital Radiologist Dr. Douglass Howry pioneered the development of pulse-echo ultrasound technology that is used around the world today. Since then, ultrasound technology has evolved to become more sophisticated and versatile, offering enhanced imaging capabilities and improved ergonomic designs. Ultrasounds are used for various reasons, such as diagnostic imaging and guided procedures.

VA has expanded the boundaries of medical imaging and care delivery with the use of **Wireless Ultrasound Technology**. This technology has improved precision in procedures, allowing for exact targeting and error reduction, which ultimately improves the quality of care for Veterans.

This innovation is the result of collaborative efforts between VHA IE's National Center for Collaborative Healthcare Innovation (NCCHI), based at VA Palo Alto Health Care System (VAPAHCS), and Medivis, a New York City-based medical technology company harnessing augmented reality (AR) and artificial intelligence to advance medical imaging.

This collaboration sought to develop AR technology for medical applications such as 3D models from



"The ability to plan your trajectory into the brain with millimeter accuracy and avoid major blood vessels or sensitive areas can significantly reduce adverse outcomes and mortality rates."

—David Arreola,
NCCHI's Deputy Director of Operations

radiographic studies like CT scans, which have proven invaluable for medical education and planning. The COVID-19 pandemic required this solution to adapt to new challenges and ultimately led to the addition of holographic teleportation technology. This allowed doctors to project themselves into exam rooms virtually, reducing the need for physical presence and extensive personal protective equipment.

In 2024, the integration of wireless ultrasound technology into the Medivis platform expanded its applications exponentially. Now, wireless ultrasound technology is pioneering additional use cases for advanced ultrasound technology, including the development of advanced imaging capabilities through simultaneous registration of radiographic images with the Veteran's body. This innovation brings technology out of training and surgical environments to Veterans' bedsides, allowing for real-time imaging and diagnostics directly at the point of care. It also enables more precise surgical interventions, enhancing accuracy and Veteran outcomes. The integration is also promising for areas such as plastic and hand reconstruction surgeries, with the potential to improve procedural accuracy.

"By virtualizing the ultrasound images and combining them with virtual monitors that can be placed anywhere in space, providers can have the ultrasound imagery all placed conveniently in the field of view that is most comfortable for them," said David Arreola, NCCHI's Deputy Director of Operations. "The ability to plan your trajectory into the brain with millimeter accuracy and avoid major blood vessels or sensitive areas can significantly reduce adverse outcomes and mortality rates."

With support from NCCHI, additional VA facilities have adopted Medivis' wireless ultrasound technology for similar use cases. Each VA facility is exploring different use cases to maximize the technology's potential impact on Veteran care, while providing Medivis with live feedback to ensure continuous improvement and adaptation to clinical needs.

Since 2019, NCCHI's Collaboration with Medivis has produced use cases for:

- Instantaneous access to health records and interactive holograms at the bedside
- AR visualization of personalized Veteran anatomy for complex surgical planning
- Real-time advanced imaging capabilities through radiographic images

Click here or visit page 80 to learn more about NCCHI!

iStock/cofotoisme

Evaluating the Healthcare Tools of Tomorrow

SimVET Champions Patient Safety Through Analysis of AI Tools

Provider

Good morning! Tell me about what's going on today.

Veteran

Good morning, ma'am! Well, I'm having some **lower back spasms** and with that I'm **not sleeping well**. I did go kayaking about a **week ago** and that's **when the issue started**.

Provider

Okay. Let's get a **scan** and we will decide what treatment is best for you. Let's **follow up tomorrow** to go over the results.

iStock/FatCamera

VA has been at the forefront of innovation for decades, pioneering revolutionary technologies like the cardiac pacemaker that not only improve care for Veterans but improve care on a global scale. Before innovations make their way to a Veteran's bedside, **SimLEARN's Simulation Validation, Evaluation, and Testing (SimVET) Analysis** service test-drives healthcare solutions with VA's front-line providers in a safe, simulated hospital environment. SimVET dedicates time to rigorously testing and evaluating novel healthcare solutions to ensure they are both safe and effective before reaching the hands of providers.

In May 2023, SimVET hosted an event for VA providers to determine requirements for the future of artificial intelligence or AI-enabled tools to reduce burnout among VA's healthcare workforce. SimVET Analysis employed an ambient dictation tool, which records, transcribes, and summarizes medical conversations, with the aim of reducing the documentation burden on front-line VA providers. SimVET convened an interprofessional group of 22 VA providers from various specialties to evaluate and provide feedback from the perspective of potential end users in over 20 simulations. Findings from the SimVET Analysis event were later used as requirements for clinical quality in SimVET's collaboration with the National Artificial Intelligence Institute (NAII) as part of VA's AI Tech Sprint.

Testing done by SimVET and VA providers is intended to pressure test innovations in a controlled, realistic, fail-safe environment. Participants used particularly challenging scenarios, such as masked conversations and multiple overlapping voices, to ensure AI-powered ambient dictation software could overcome frequent obstacles that are particularly crucial in busy clinical environments where clarity and accuracy are required.

Click here or visit page 80 to learn more about SimLEARN!

One of the primary benefits identified during the Analysis event was the potential for this technology to substantially reduce time VA providers spend on documentation. China Payne, Associate Director of SimVET Analysis, notes, "Ambient dictation provides the opportunity to leverage AI to reduce the administrative burden on clinicians while also revitalizing the experiences for both VA providers and Veterans."

The SimVET Analysis event confirmed several benefits of ambient dictation, with providers praising its ease of use and filtering of irrelevant conversation. VA providers at the event also noted the lack of completeness and complexity of the transcripts, as well as inconsistencies with organizing information. Ultimately, they expressed excitement about the opportunities of this innovation and gave suggestions on how to mitigate potential barriers. This balanced and objective reporting is the goal of SimVET Analysis.

By simultaneously establishing the value of this technology and identifying areas for improvement, SimVET is advancing the care Veterans will receive in the future. SimVET's work demonstrates VA's commitment to leveraging cutting-edge technology to improve Veteran care—ensuring only the most effective and safe innovations are implemented. This proactive approach enhances care quality and supplies providers with the tools they need to succeed and the ability to test them before deployment. "This SimVET Analysis event allowed VA providers and subject matter experts to be a part of the decision-making process for new technology, providing valuable insights for VA," said Dr. Scott Wiltz, SimLEARN Medical Director. "This novel approach places VA at the head of the pack in fostering successful, safe, and high-quality application of AI technology."

From One-Size-Fits-All to Personalized Veteran Care

Automation in Pharmacogenomic Testing Advances Delivery of Personalized Treatment and Improves Outcomes

Pharmacogenomics (PGx) is a simple solution to a complex problem. PGx tests are an application of precision medicine that typically involve analyzing a blood sample to determine how an individual's genes affect pharmaceutical response or metabolism, thus allowing providers to optimize the dose or type of medicines and prevent adverse drug events.

VHA's National Pharmacogenomics Program (NPP), which began in 2019, is a national effort under VHA's National Oncology Program Office. The overall objective of the NPP is to provide an end-to-end solution to support providers using PGx. This program supplies educational materials for providers to use to review PGx interpretations and post-testing consultations for PGx-trained pharmacists, as well as a centralized data infrastructure to support a variety of clinical decision support tools to help VA providers interpret PGx test results.

While caring for her father during his chemotherapy, Dr. Rona Margaret Relova, a Research Health Scientist at VA Palo Alto Health Care System, witnessed the devastating effects of

acute drug-induced liver failure. She realized the importance of eliminating the one-size-fits-all approach in treatments. "There are unique variations in drug metabolism; if we had PGx tests back then, perhaps the precision choice and dose of drug may have led to better outcomes for my father."

This deeply personal adversity invigorated Dr. Relova's passion for enhancing the Veteran experience through precision medicine. As a 2024 VHA IE Senior Innovation Fellow, Dr. Relova joined the NPP's effort to expand and improve upon VA's delivery of PGx testing by making it more timely and efficient.

VA conducts its PGx testing with outside labs, which means results must be entered manually into different parts of the Veteran's electronic health records (EHR). This delays PGx test results being made available to VA providers and may potentially delay lifesaving, personalized prescriptions. As part of her fellowship, Dr. Relova spearheaded a novel solution to allow PGx results to be rapidly and accurately transmitted into the EHR using scalable, automated tools.

The benefits of PGx for Veterans can be profound. By integrating PGx info into the routine workflow of providers and making it easily accessible, the prescriber can then use it as a decision support tool at point-of-prescribing. As a result, Veterans receive medications that are better tailored to their genetic makeup, thus minimizing adverse effects and toxicity, and optimizing efficacy.

"Pharmacogenomics testing in VA is a part of our state-of-the-art clinical services for treating Veterans," said Dr. Deepak Voora, Executive Director of NPP. "To date, more than 84,378 PGx tests have been ordered by 8,132 providers across 139 VA facilities. VA has one of the largest deployments of PGx implementation in any healthcare system. Dr. Relova's work has moved the needle in terms of our ability to integrate PGx test results into routine clinical care."

Dr. Relova's project has successfully piloted the automated push of PGx test results and interpretations in three VA facilities: Palo Alto, Charleston and San Francisco. The timely return of PGx information has the potential to impact more than 5,000 Veterans per month.

Click here or visit page 80 to learn more about VA's Pharmacogenomics (PGx) Initiative!

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Personalized Medicine

Patient A may see best results with 2 tablets of a medication.

Patient B may only need 1 tablet.

Patient C will only need 1/2 of a tablet of the same medication.

Patient D may need a different drug to see the same benefits.

8,132 Providers from

139 VA facilities have ordered

84,378 PGx tests

"...Veterans receive medications that are better tailored to their genetic makeup, thus minimizing adverse effects and toxicity, and optimizing efficacy."

—Dr. Rona Margaret Relova, Research Health Scientist at VA Palo Alto Health Care System and 2024 VHA IE Senior Innovation Fellow

Mobile Innovation in Simulation Training

Bringing Advanced Simulation-based Training Directly to VA Facilities

Training VA providers is critical to ensuring Veterans receive the best care possible. It advances their competence and confidence, ensuring the care provided to Veterans is always improving. Simulationists are the VA employees who facilitate and educate VA providers through simulation activities, products, and services. Simulation-based training is an invaluable resource for VA and allows providers to practice and perfect their skills before administering care to Veterans.

SimLEARN's Mobile Introduction to Clinical Simulation (MICS) course equips simulationists with the tools needed to use simulation-based training effectively when training VA providers. This course is based on the advanced, evidence-based healthcare simulation training provided at the National SimVET

Iris Appenrodt prepares a simulated hospital environment for instructional training.

Center in Orlando, Fla. MICS takes SimLEARN's signature simulation training mobile, making it more accessible to VA providers across the country. Simulationists develop the skills necessary to design, develop, implement, debrief, and evaluate simulation-based healthcare training at their respective VA facilities. MICS is not only about convenience; it is ensuring simulationists can provide the best possible training environment for VA providers.

A tailored training approach closes gaps in care and ensures that each Veteran receives consistent, high-quality care, regardless of location. By adapting this training to the local region, MICS empowers simulationists to apply what they learn directly to the needs of the local Veteran population. "By providing a safe learning environment that resembles reality, providers can practice skills and make mistakes with zero harm to the Veteran," says MICS Course Director Iris Appenrodt. "Those mistakes are then used as learning opportunities to increase competence and optimize care."

Shannon Swain, U.S. Army Veteran and Associate Director of SimLEARN's Clinical Training & Engagement (CTE) team, also notes the importance of effective training. "Pilots are getting trained in a very realistic environment where they encounter simulated emergencies, such as engine failure, giving them the opportunity to learn from mistakes and optimize their skills in a safe environment. The same is true in healthcare simulations, where we provide this realistic environment to train providers to deal with various mental and medical emergencies in the most effective way, saving Veterans' lives," said Swain.

Click here or visit page 80 to learn more about SimLEARN!

Simulationists who participated in MICS' hands-on, simulation-based training recognize the value, with one participant noting, "The course was incredibly beneficial and highlighted how well-structured simulation-based training can truly solidify learning and transfer knowledge to real world scenarios."

The first MICS host facility was established at North Las Vegas VA Medical Center. The MICS program is being considered by other regions, including VA Northwest Health Care Network (VISN 20) and VA Midwest Health Care Network (VISN 23). By bringing state-of-the-art healthcare simulation training directly to simulationists who facilitate these trainings for providers, SimLEARN's MICS program is ensuring that VA providers are best prepared to care for Veterans across the Nation consistently and with the highest standard of care.

> "Pilots are getting trained in a very realistic environment where they encounter simulated emergencies, giving them the opportunity to learn from mistakes and optimize their skills in a safe environment. The same is true in healthcare simulation, where we provide this realistic environment to train providers..."
>
> *— Shannon Swain, U.S. Army Veteran, Associate Director of SimLEARN's CTE Team*

Archie Jugarap, U.S. Navy Veteran and OAM Health Systems Specialist, creates 3D-printed dental prosthetics.

Pioneering Digital Dentistry

Advancing Veteran Dental Care Through Digital Innovations

OAM is pioneering the future of accessible and customizable dental care through **Digital Dentistry**, connecting Veterans to the soonest and best care. This innovative dental approach is revolutionizing the care experience for both Veterans and VA providers, resulting in reduced treatment times, fewer visits, and greater comfort for Veterans.

For years, analog impressions involved creating physical molds of Veterans' teeth to craft dentures, crowns, and bridges. While reliable, this method presented several challenges. Making traditional impressions can be uncomfortable and anxiety-inducing for Veterans, plus they require multiple in-person appointments, which is time consuming for Veterans in rural areas or with limited mobility.

Digital dentistry uses advanced scanning technology to create precise digital models of a Veteran's teeth, offering several key advantages. The non-invasive nature of digital impressions is significantly more comfortable for Veterans. The process is quicker, and its accuracy minimizes errors and adjustments.

Veteran Clay Hill shows off his transformed smile

Digital dentistry also transforms care timelines. Traditional dentures, which take five to six months and require four to five visits to properly fabricate, can now be completed in half the time. Should a Veteran lose their dentures in the future, the digital workflow eliminates the need for additional in-person visits for a replacement set, meaning they will only go without their prosthesis for approximately one week while it is re-fabricated from saved files. Night guards, traditionally a three-to-four-week process, can now be digitally completed in just one week.

"OAM's digital denture workflow is predictable and efficient because it not only provides a faster delivery time to Veterans, but allows me to see more Veterans in the same amount of clinic hours. This is a win for all involved," shared Dr. Holly Eydenberg, a Dentist at VA Puget Sound Health Care System.

With this new technology, OAM was able to give a 76-year-old Vietnam Veteran, Clay Hill, a smile he could be proud of. For 30 years, Mr. Hill had been living with mismatched dentures. He visited OAM's facility at VA Puget Sound to take advantage of their services. He encountered a team dedicated to using the latest in digital dentistry—a combination of advanced 3D printing and digital design technologies that craft patient-specific dentures tailored to each Veteran's needs, enhancing stability, functionality, and confidence.

Overwhelmed with gratitude and joy, he expressed his profound satisfaction with the outcome. "VA Puget Sound did an excellent job and I would give them a five-star rating," he said. "I would send any of my Veteran buddies in need of teeth to this team—the dentures are awesome, feel great, and look great!"

OAM's role extends beyond care delivery to supporting VA dental groups in integrating digital dentistry methods. By establishing internal fabrication capacity and providing future training and consulting support, OAM ensures that all VA dental labs can adopt and benefit from these advanced technologies. OAM's commitment to equity ensures that Veterans in remote or underserved areas also have access to high-quality dental care. This mission is supported by collaborations with VA's Central Dental Lab in Texas, OAM's main clinical partner, and others to expand capacity and manage increased demand.

"The rapid evolution of digital technology in dentistry has brought exponential improvement in dental prosthetic workflow—from chairside intraoral digital image acquisition to 3D printing and milling. The efficiency in digital workflow reduces expenses, turn-around times, and provides superior product quality," said Dr. Phillip R. Sandefur, Director of Dental Laboratory Operations, VHA Office of Dentistry.

As of July 2024, OAM has used digital dentistry technologies to help VA dental labs improve the quality of dental care by distributing over 3,400 dental products to Veterans. Plans for expanding digital dentistry solutions across VA are in progress, making these advanced services available nationwide. Veterans interested in learning more about digital dentistry should speak with their VA dental provider.

Click here or learn more about Digital Dentistry on page 80!

"The rapid evolution of digital technology in dentistry has brought exponential improvement in dental prosthetic workflow... The efficiency in digital workflow reduces expenses, turn-around times, and provides superior product quality."

— Dr. Phillip R. Sandefur, Director of Dental Laboratory Operations, VHA Office of Dentistry

Code SET

Saving Lives One Emergency at a Time

In 2023, a team from the Lexington VA Health Care System came up with an innovative idea to better protect Veterans from complications during and after surgery. They wanted to test a new process for responding to surgical emergencies, such as bleeding, that threaten life, limb, or organ in a simulated space where Veterans would never be at risk. SimLEARN's extensive experience in simulation-based learning strategies made it the perfect partner for this innovative idea.

"We quickly realized this process was a missing code in the chain of survival," said Lisa Baker, Lisa Baker, U.S. Navy Veteran and SimLEARN's Director of Resuscitation Education and Outreach. "There is code blue and code stroke for vulnerable patients with specific medical emergencies. There needed to be a trained team with a specific code response to surgical emergencies, and Code SET was created to fill that missing response."

"Code SET is the first of its kind. We created a process that efficiently cuts the response time for surgical emergencies."

—Amanda Borchers, RN and Patient Safety Manager with Lexington VA Health Care System

After being contacted by the Lexington VA team, SimLEARN developed an innovative approach to how Lexington and other VA facilities could create a system-wide response to surgical emergencies. This is where **Code SET (Surgical Emergency Team)** began. Code SET is a surgery department process with the appropriate resources to stabilize Veterans and create a clear process for emergent return to the operating room (OR).

The SET team specializes in responding specifically to surgical emergencies. Code SET streamlines emergency response times and increases positive outcomes for Veterans by identifying a specific process with roles and responsibilities in the event of a surgical emergency. It also establishes bedside resources for stabilization, cognitive aids for each surgical team member, and updated digital pagers that enhance communication and coordination between provider teams.

A SET kit was developed to aid in these surgical emergencies, which includes instruments to decompress an airway, a tourniquet to stop the bleeding of an extremity, and other critical resources. The SET team also developed a cognitive aid that outlined specific steps to take during a surgical emergency. After rounds of positive simulation at their testing center, the Lexington VA is now educating medical staff throughout VA. The Code SET team is creating a playbook that contains all the processes and educational curriculum, along with cognitive aids on how to deploy Code SET at other VA facilities.

"Code SET is the first of its kind," said Amanda Borchers, a Registered Nurse and Patient Safety Manager with the Lexington VA "We created a process that efficiently cuts the response time for surgical emergencies."

Code SET is anticipated to be an operating guide for VA facilities and providers across the Nation. This ensures that there is a swift, organized, and effective policy response to critical medical emergencies, playing a vital role in saving lives and improving Veteran outcomes.

Click here or visit page 80 to learn more about SimLEARN!

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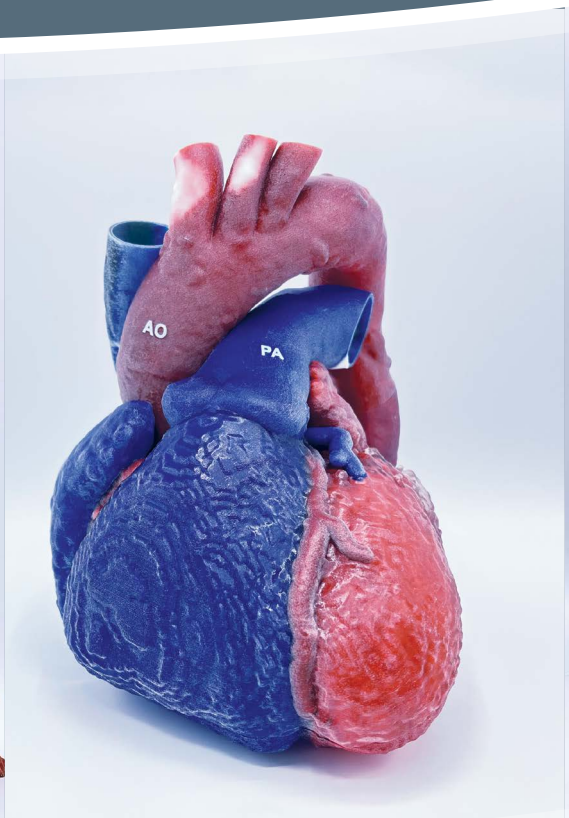

Pre-Procedural Models

A New Dimension in Veteran Surgical Care

Veterans with an upcoming complex surgery often have concerns about the unknowns of the procedure. VA providers take time to answer Veterans' questions, such as how difficult the recovery will be, how long they will be under anesthesia, and what the procedure's success rate is. For Veterans worried about the mechanics of the surgery itself, VA offers an exciting 3D-printed solution.

OAM is transforming the concept of informed patient decision-making through the innovative use of **Pre-Procedural Models (PPM)**. These anatomically correct models, derived from Veterans' computed tomography (CT) and magnetic resonance imaging (MRI) scans, provide a way for Veterans—and their family members and caregivers—to better visualize and comprehend the intricate details of surgical procedures. OAM can print life-size models of organs, bones, tumors, and even aneurysms. These innovative 3D models provide a tangible and visually comprehensible way for Veterans to grasp the complexities of their surgical procedures. For example, a heart surgeon can hold a Veteran's model heart in their hand while explaining the step-by-step plan for the upcoming procedure.

"VA is an early adopter of this technology," said Bill Corcuera, U.S. Navy Veteran and OAM Site Lead at VA Northeast Ohio Healthcare System. VA's surgeons are also benefiting from this innovation.

"The surgeon's model was able to show me exactly what was going to be happening and explaining my surgery with a visual…a hands-on device to help me understand what was going on. It helped me visualize the surgery, reducing my apprehensions significantly."

— Earl Buckwalter, U.S. Navy Veteran

Before entering the operating room, surgeons using these models can prepare for complex procedures through advanced views of the anatomy and can even practice cuts to determine optimal angles.

U.S. Navy Veteran Earl Buckwalter needed a complex shoulder surgery after a severe injury significantly limited his mobility. As someone without a medical background, Buckwalter struggled to understand the X-rays and medical diagrams his doctor initially used to explain the upcoming procedure.

Dr. Karl Scheidt, who treated Mr. Buckwalter at the Clement J. Zablocki VA Medical Center in Milwaukee, turned to OAM for the practical application of these models. Using the model, he could not only meticulously plan the surgery but also demonstrate the procedure to Mr. Buckwalter, enhancing his understanding and confidence in the treatment. This hands-on approach allowed for a precise preoperative plan that reduced surgical time and the amount of anesthesia needed; both are crucial factors in speeding up post-surgical recovery.

Click here or learn more about OAM on page 80!

"I consulted with Dr. Katie Schultz and her colleague in the 3D Printing Lab at VISN 12 and asked if there was a way for me to see the inside of the bone in addition to the outside of the bone," says Dr. Scheidt. "Katie's answer was, 'yes, we can do that,' and that's how we got the split model where I could see the inner humeral canal and how far up that went." This depth of visualization enabled Dr. Scheidt to strategize the best possible approach to reconstructing Mr. Buckwalter's shoulder, ensuring optimal surgical alignment.

Mr. Buckwalter attests to the benefits of having a 3D model as part of his pre-surgical consultation. "The surgeon's model was able to show me exactly what was going to be happening and explaining my surgery with a visual…a hands-on device to help me understand what was going on," he says. "It helped me visualize the surgery, reducing my apprehensions significantly."

The use of PPM at VA is revolutionizing the approach to surgical care, making complex procedures more transparent and less intimidating for Veterans. By providing detailed visual aids, these models facilitate better surgical planning and empower Veterans, enabling them to actively participate in their care discussions. Veterans should consult with their VA medical provider about the benefits a PPM may have for planning their surgery.

INDEX OF INNOVATIVE CARE

VA provides world-class healthcare to eligible Veterans. Here in the VA Index of Innovative Care, you can explore the programs and products highlighted in this report. VA is committed to transforming promises into progress, ensuring Veterans can discover and engage with our groundbreaking developments.

VHA's mission to provide accessible healthcare solutions to Veterans is ongoing. While some programs in this index may not yet be available at a VA facility near you, our providers and their teams are dedicated to expanding care to all eligible Veterans—and they are actively working towards that goal. The list of VA facilities participating in the programs and projects below is current as of September 2024; however, they may change. For the most up-to-date information, please scan the QR codes or consult your VA provider. Feel free to share this report with your VA provider for reference.

If you are not yet enrolled in VA care, explore the four ways to enroll here.

HOW CAN YOU TAKE ADVANTAGE OF

VA'S INNOVATIVE HEALTHCARE

Enroll in the Nation's largest integrated health system and gain access to care that is personalized, proactive, and patient-driven.

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The fastest and easiest way to get access to your benefits.
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Apply **BY PHONE**

Call 1-877-222-8387 Monday through Friday, 8 a.m. to 8 p.m. EST.

Apply **BY MAIL**

Print, fill out, and mail VA Form 10-10EZ to:
Enrollment Eligibility Center
PO Box 5207
Janesville, WI 53547-5207

Apply **IN PERSON**

Click here to find the VA facility nearest to you.

www.va.gov/health
www.innovation.va.gov

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EXPANDING OUR REACH: ACCESS TO CARE AND SERVICES

Caregiver Support Program (CSP) Hands-Only CPR Training

Alabama
Central Alabama VA Medical Center (Montgomery)
Arizona
Southern Arizona VA Health Care System (Tucson)
California
Jennifer Moreno Department of Veterans Affairs Medical Center (San Diego)
Palo Alto Medical Center
Colorado
VA Eastern Colorado Healthcare System (Aurora)
Grand Junction VA Medical Center
D.C.
Washington DC VA Medical Center
Florida
James A. Haley Veterans' Hospital (Tampa)
Georgia
Joseph Maxwell Cleland Atlanta VA Medical Center
Idaho
Boise VA Medical Center
Illinois
Marion VA Medical Center
Jesse Brown VA Medical Center (Chicago)
Indiana
Richard L. Roudebush VA Medical Center (Indianapolis)

Kentucky
Robley Rex Department of Veterans Affairs Medical Center (Louisville)
Maine
VA Maine Health Care System – Togus (Augusta)
Mississippi
G.V. (Sonny) Montgomery VA Medical Center (Jackson)
Missouri
St. Louis VA Medical Center
Jefferson Barracks & John J. Cochran Veterans Hospital (St. Louis)
John J. Pershing Veterans' Administration Medical Center (Poplar Bluff)
Michigan
John D. Dingell VA Medical Center (Detroit)
Nebraska
Omaha VA Medical Center
New York
Buffalo VA Medical Center
Samuel S. Stratton VA Medical Center (Albany)
VA Hudson Valley Health Care System (Montrose)
North Carolina
Durham VA Health Care System
North Dakota
Fargo VA Health Care System
Ohio
Cincinnati VA Medical Center
Dayton VA Medical Center
Oregon
Portland VA Medical Center
Roseburg VA Medical Center
Pennsylvania
Corporal Michael J. Crescenz VA Medical Center (Philadelphia)
VA Pittsburgh Healthcare System – University Drive Campus (Pittsburgh)
James E. Van Zandt VA Medical Center (Alatoona)
Lebanon VA Medical Center
Butler VA Medical Center
Rhode Island
Providence VA Medical Center
South Dakota
Royal C. Johnson Veterans' Memorial Hospital (Sioux Falls)
Texas
Dallas VA Medical Center
Thomas E. Creek VA Medical Center (Amarillo)
Temple VA Clinic
Virginia
Richmond VA Medical Center
Washington
Mann-Grandstaff VA Medical Center (Spokane)
Wisconsin
Tomah VA Medical Center
Wyoming
Cheyenne Veterans Affairs Medical Center

3D-Printed Naloxone Trainer

California
Sacramento VA Medical Center
Massachusetts
Brockton VA Medical Center
Bedford VA Medical Center
Missouri
John J. Pershing VA Medical Center (Poplar Bluff)
Montana
Fort Harrison VA Medical Center
Nevada
North Las Vegas VA Medical Center
New Hampshire
Manchester VA Medical Center
New York
Syracuse VA Medical Center
Ohio
Louis Stokes Cleveland VA Medical Center
Dayton VA Medical Center
Pennsylvania
Lebanon VA Medical Center
Tennessee
James H. Quillen VA Medical Center (Mountain Home)
Virginia
Hampton VA Medical Center
Richmond VA Medical Center
Vermont
White River Junction VA Medical Center
Washington
Mann-Grandstaff VA Medical Center (Spokane)
Jonathan M. Wainwright Memorial VA Medical Center (Walla Walla)
Washington, D.C.
Washington DC VA Medical Center
Wisconsin
William S. Middleton Memorial Veterans' Hospital (Madison)
Tomah VA Medical Center
Clement J. Zablocki VA Medical Center (Milwaukee)

Tech Enabled Respite Homecare Model Pilot (TERHM)

TERHM was piloted at the following VA facilities and is currently being evaluated. Scan the QR code for more information on VA's Homemaker and Home Health Aide services.

Florida
Orlando VA Medical Center
Massachusetts
Jamaica Plain VA Medical Center (Boston)
New Hampshire
Manchester VA Medical Center
Tennessee
Nashville VA Medical Center
Virginia
Richmond VA Medical Center
Washington, D.C.
Washington DC VA Medical Center

Physical Therapy Embedded in Patient Aligned Care Team (PACT PT)

PACT PT is available at 194 VA facilities. Scan the QR to find out more information or locate a facility near you that offers PACT PT.

EXPANDING OUR REACH: ACCESS TO CARE AND SERVICES

High-Risk Eye and Limb Preservation Program (HELPP)

Georgia
VA Atlanta Healthcare System

Coming Soon:
VA Louisville Healthcare System (Corpus Christi, TX
Cookeville VA Clinic (Cookeville, TN)
Corpus Christi VA Clinic

Diabetes Self-Management Education and Support Program (DSMES)

Alaska
Anchorage VA Medical Center
Alabama
Central Alabama VA Medical Center (Montgomery)
Arkansas
Fayetteville VA Medical Center
Arizona
Phoenix Midtown VA Clinic
California
VA Northern California Health Care System
Florida
Bruce W. Carter VA Medical Center (Miami)
C.W. Bill Young VA Medical Center (Bay Pines)
Orlando VA Medical Center
Iowa
Iowa City VA Medical Center
Illinois
Jesse Brown VA Medical Center (Chicago)
Indiana
Marion VA Medical Center
Kentucky
Troy Bowling Campus – Lexington VA Health Care System
Louisiana
New Orleans VA Medical Center
Maine
Togus VA Medical Center
Michigan
Saginaw VA Clinic
Missouri
Harry S. Truman Memorial Veterans' Hospital (Columbia)
Montana
Fort Harrison VA Medical Center
North Carolina
Fayetteville VA Medical Center
Greenville VA Clinic
New York
Reno East VA Clinic
Buffalo VA Medical Center
Ohio
Akron VA Clinic
Chalmers P. Wylie Veterans Outpatient Clinic (Columbus)
Cincinnati VA Medical Center
Columbus VA Clinic
Lorain VA Clinic
Louis Stokes Cleveland VA Medical Center
Parma VA Clinic
Sandusky VA Clinic
Pennsylvania
Butler VA Medical Center
Philadelphia VA Domiciliary
Rhode Island
Providence VA Medical Center
Tennessee
James H. Quillen VA Medical Center (Mountain Home)
Texas
Charles Wilson VA Outpatient Clinic (Lufkin)
Michael E. DeBakey VA Medical Center (Houston)
San Antonio - Southwest Military VA Clinic
Utah
George E. Wahlen VA Medical Center (Salt Lake City)
Washington
Mann-Grandstaff VA Medical Center (Spokane)
West-Virginia
Hershel "Woody" Williams VA Medical Center (Huntington)

EXPANDING OUR REACH: ACCESS TO CARE AND SERVICES

VA Delivery of Harm Reduction Supplies and Services

California
San Francisco VA Medical Center
Florida
James A. Haley Veterans' Hospital (Tampa)
Orlando VA Medical Center
Illinois
Captain James A. Lovell Federal Health Care Center (North Chicago)
Edward Hines Junior Hospital (Hines)
Jesse Brown VA Medical Center (Chicago)
Michigan
Oscar G. Johnson VA Medical Facility (Iron Mountain)
Ohio
Cincinnati VA Medical Center
Utah
George E. Wahlen VA Medical Center (Salt Lake City)
Wisconsin
Tomah VA Medical Center

HELPING VETERANS THRIVE: RESILIENCY THROUGH MENTAL HEALTH

Mission Daybreak

Scan the QR code to learn more about VA's Mission Daybreak

SDOH Information Exchange Referral Platform (IERP)

Veterans interested in social connection resources may talk to their VA primary care provider. To begin receiving Compassionate Contact Corps calls, please contact your VA primary care provider or social worker to request a referral. If you would like to volunteer, scan the QR code to find your local VA Center for Development & Civic Engagement point of contact.

Veterans Socials

There are currently over 100 Veterans Socials across 22 states. Scan the QR code to learn more and view the Veterans Socials Quick Start guide.

Virtual Reality for Peer Support

Veterans interested in social connection resources may talk to their VA primary care provider. Scan the QR code to visit VA Immersive's website and learn about their pilot programs and collaborations.

HELPING VETERANS THRIVE: RESILIENCY THROUGH MENTAL HEALTH

My Reasons for Living Lockbox

The Lockbox is currently being prototyped, and the Lockbox team is working to make it available to Veterans at more VA facilities. Scan the QR code to access resources from the Veterans Crisis Line.

DELIVERING MORE TOGETHER: COLLABORATION IS THE NEW COMPETITION

Veterans Service Organization Engagement

Veterans interested in engaging more with their local VSOs may ask their VA social worker or CDCE chief for connections to local organizations.

VHA-Uber Health Connect Initiative (VUHC)

Eligible Veterans needing access to and from VA medical appointments can scan the QR code to contact their facility's Beneficiary Travel point of contact to learn more about VUHC Initiative.

Virtual Reality for Chronic Pain Management

Veterans experiencing chronic pain and interested in this innovative treatment are encouraged to contact their VA provider or email VAimmersive@va.gov. Scan the QR code to visit VA Immersive's website and learn about their pilot programs and collaborations.

Defibrillator Simulator

The Defibrillator Simulator is available at no cost to anyone interested in learning life-saving advanced cardiac life support (ACLS) skills. Scan the QR code to engage with the live simulation!

VA Intrapreneurial Product Marketplace (VAIPM)

Scan the QR code to view the Hinged Tub Transfer Chair, Self-Leveling Walker, and more on the VA Intrapreneurial Product Marketplace.

The Surgical Pause

The Surgical Pause is currently adopted at 42 VA facilities. Scan the QR code to learn more about the Surgical Pause and locate a facility near you.

Wireless Ultrasound Technology

Scan the QR code to learn more about the work of VA's National Center for Collaborative Healthcare Innovation.

SimVET Analysis

Scan the QR code to learn more about SimLEARN's SimVET team.

Pharmacogenomics (PGx) Initiative

Scan the QR code for more information on VA's Pharmacogenomics efforts.

Mobile Training for Clinical Training and Engagement

Nevada
North Las Vegas VA Medical Center

Digital Dentistry

Veterans interested in learning more about digital dentistry should speak with their VA dental provider and scan the QR code to learn more about VA's dental programs.

Code SET

Scan the QR code to learn more here about the variety of ways SimLEARN is educating VA's workforce.

Pre-Procedural Models

Veterans interested in learning more about OAM's Pre-Procedural Models can contact their VA provider for more information. Scan the QR code to learn more about OAM.

To the Nation's Esteemed Veterans,

We extend our heartfelt gratitude not only for your dedicated service to our country, but also for your ongoing trust in VA to provide the quality care you rightfully deserve. VA is now delivering more care to more Veterans than ever before, and remains steadfast in its sacred commitment to care for Veterans, their families, caregivers, and survivors. Innovation is a crucial part of this commitment, as is keeping you informed about the ways VA is evolving to meet the diverse healthcare needs of Veterans.

We hope you enjoyed learning about some of the innovative solutions and healthcare "firsts" highlighted in this report, representing just a fraction of the Veteran-centered innovation efforts happening every day across our healthcare system. This year's theme, "From Promise to Progress: Evolving Veteran Healthcare," was inspired by your dedication to service before self and the sacrifices you made to protect our Nation. Our mission is to honor your dedication through our unwavering commitment to delivering the most innovative healthcare solutions. Whether through the delivery of harm reduction supplies and services, VR take-home headsets to manage chronic pain, or wireless ultrasound technology, Veterans remain at the heart of our efforts.

VA excels when Veterans are at the center of our care, playing an active role in shaping the future of innovation by providing feedback on new programs and embracing novel approaches. If you learned about an innovative project in this report that is already available at your local VA medical center, we encourage you to use it. If you read about an innovation that is not yet available at your local VA facility, we urge you to discuss it with your provider.

Thank you for taking the time to read this report and learn about the impactful innovations coming from VA. We will continue to innovate around Veteran needs and adapt to the ever-changing healthcare landscape. We hope this report has strengthened your faith in VA and our ability to advance the standard of healthcare for the millions of Veterans entrusted to our care. It is our pleasure to serve you all as you have served us.

A very special thank you to all the Veterans featured in the 2024 VHA State of Innovation Report.

Sincerely,

Dr. Mark Zhang DO, MMSc, FAMIA
Chief Officer, VHA Office of Healthcare Innovation and Learning

A very special thank you to all of the Veterans featured in the 2024 VHA State of Innovation Report

George - U.S. Army
John - U.S. Navy
Samuel - U.S. Marines
Garry - U.S. Army
Larock - U.S. Marines
William - U.S. Air Force
Joshua - U.S. Air Force
Thomas - U.S. Army
Cherise - U.S. Army
Shannon - U.S. Air Force
Lacie - U.S. Air Force
Katherine - U.S. Air Force
Heidi - U.S. Marines
Shannon - U.S. Army

Steven - U.S. Air Force
Clay - U.S. Army
Archie - U.S. Navy
T.J. - U.S. Army


Christian Biker
ROAD CAPTAIN