

VA CENTER FOR INNOVATION

2010 - 2012 STAKEHOLDER REPORT



CENTER FOR INNOVATION

USING ACCESS, COST, QUALITY, AND SATISFACTION AS OUR GUIDEPOSTS, THE VETERANS AFFAIRS CENTER FOR INNOVATION LOWERS THE BARRIER OF ENTRY FOR QUALITY INNOVATIONS THAT SUPPORT AND ACCELERATE VA TRANSFORMATION.

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LETTER FROM THE SECRETARY

In early 2010, we launched the Department of Veterans Affairs Innovation Initiative (VAi2) to bring fresh thinking to Departmental challenges. I do not think anyone at that time would have predicted the response. The ingenuity and personal commitment to Veteran services quickly told us that we were on to something special. Ideas poured in from VA employees, entrepreneurs, and industry. Since the founding of VA's innovation program, we have received over 15,000 ideas from our employees and nearly 800 submissions from the private sector and academia–all focused on improving the way in which we deliver care and benefits to Veterans.

Through an open and transparent process, we identified new ways to improve the quality of the care we deliver to more than 6 million Veterans and their family members every year. Some innovations target dramatic improvements in efficiency, technology, and new business practices. Others offer promising ideas to open avenues of greater access to health care and benefits.

In this report you will see how we are establishing the VA Center for Innovation (VACI) on the foundation begun by VAi2. This move reflects my commitment to fostering a culture of creativity and determination to make life better for our Veterans, their families, and their survivors. This commitment is rooted in a belief that a large organization benefits from maintaining a disciplined process for tapping the talent and expertise of those on its front lines and innovators across the country.

This report describes the successful strategy that led to 130 investments in innovative improvements to VA benefits and health care services. You will learn about how VACI will continue to turn ideas into realities that help us meet the mission of the Department in the 21st century.

With the tools to bring the top ideas to light and put them through a rigorous evaluation process, VACI is bringing out the best in VA and redefining us as an agency of innovation.

Sincerely.

Eric K. Shinseki

Secretary of Veterans Affairs



LETTER FROM THE VACI DIRECTOR

At the Department of Veterans Affairs Center for Innovation (VACI), we have worked hard to cultivate a culture that embraces innovation from a variety of sources including federal employees, companies, entrepreneurs, and academic leaders from across the country. We have created a mechanism that brings private sector competitiveness and agility to public service. Every day we look to face challenges and solve problems, creatively and effectively, to better serve our Nation's Veterans. The result is a promising portfolio today of 130 innovations.

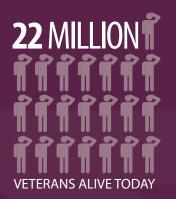
We measure each one by the impact it has on access, quality, and satisfaction, while reducing cost. We seek to implement innovations that deliver results and ensure that VA continues to be a responsive organization serving the needs of Veterans well into the future.

In the months and years to come, we will continue to fund innovations, test solutions, and strengthen partnerships with the private sector. Most importantly, we will work to ensure that innovation is part of the culture of VA and that we use partnerships to stay on the cusp of technological, medical, and operational advancements.

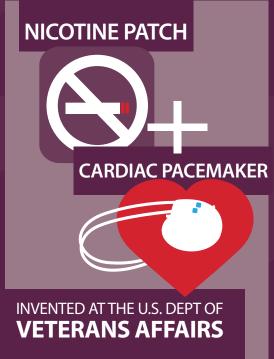
VACI delivers on a commitment to finding and fostering the very best solutions for our Veterans. I am proud to be a part of that commitment and look forward to working with all the companies, individuals, and organizations creating tomorrow's great ideas.



Director, VA Center for Innovation

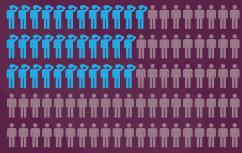






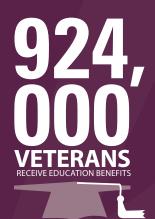




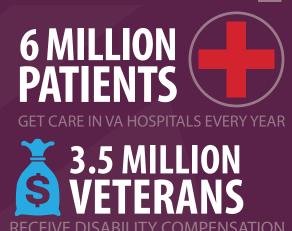


VETERANS











INNOVATION AT VA

Secretary Shinseki launched the VA Innovation Initiative (VAi2) in the spring of 2010 to marshal resources to address VA's most pressing challenges.

At the onset, VAi2 used a competition-based format to gather and vet ideas for innovation. Contests and competitions were a fresh approach for the Department to access the talent and expertise of entrepreneurs, industry and non-profit leaders, and our 320,000 VA employees.

Through the use of Industry Innovation Competitions, Employee Innovation Competitions, Prize Challenges, and Special Projects, we invested in promising solutions to address the challenges VA faces in its constant pursuit of improvement. These innovations range from empowering the more than six million patients receiving VA health care with access to their own electronic health record, to breakthrough technologies in telemedicine, to developing effective models for helping Veteran entrepreneurs succeed in launching new businesses. All projects are measured by their ability to improve the quality of VA care and services; increase access to those services; reduce or control costs; and improve customer satisfaction. And these innovations are doing just that.

The transition – or rather evolution – into VA's Center for Innovation (VACI) represents an important step for VA, Veterans, and VA employees. The creation of VACI emphasizes VA's commitment to continuous innovation. And while the initial track record of innovation at VA is promising, the real work lies ahead in institutionalizing a culture of enterprise-wide innovation that supports informed risk taking, rewards results, and challenges the status quo.

We invested in promising solutions to address the challenges VA faces in its constant pursuit of improvement.

Innovation needs structure, resources, and people. By creating VACI, we are laying those foundations with a staff committed to trying new ideas and problem-solving. Along with the competitions and challenges, which remain an important part of the Center, four distinct components have been developed to further enable collaboration with innovators from across the spectrum of private sector, academia, and Federal government, bringing to bear new ways to source ideas and investigate solutions.

Portfolio

The real action, the visible evidence of innovation taking place in the real world, is found here. Representing nearly all aspects of VA's mission, the Portfolio includes more than 130 innovations. These follow a lifecycle of:



No innovation pilot lasts for more than two years, and all reach a decision point with only three possible outcomes: Go, No Go, Further Development. If a project passes the test, we work with VA leadership to deploy it further. If it needs a few tweaks, but its potential remains high, we will make the necessary adjustments or enhancements before it rolls out. If it falls short entirely, that negative result is valuable learning and we have saved the agency time and money. An organization the size of VA, with an annual budget north of \$130 billion and serving millions of Americans, needs to find those dead ends early and at a low cost. We would rather have a few test flights and bumpy landings to make sure an innovation soars once it is released to the public.

Fellows

One of our most exciting new features at VACI, the Fellows program, encompasses two subsets: Innovation Fellows, a place for innovators from the Federal government (either within VA or even from another agency); and Entrepreneurs in Residence (EIR), which will pull innovators from the private sector and academia. The Fellows and EIRs will take on roles such as developing and managing a competition and the resulting pilot program or investigating topics of high priority or special interest where new approaches, solutions, and innovations may be required.

Network

Incorporating innovation throughout the fabric of VA will be aided by our Innovators Network, an online community encouraging collaboration among VA employees and contractors. The network will provide

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Partnerships are the cornerstone of creativity, innovation, and progress.

VA's independent innovation research function serves to foster collaboration with the private sector.

opportunities to test and validate best practices or other solution sets at pilot locations, and it will foster a community of interest among VA employees focused on results and organizational transformation. The Innovators Network will link creative ideas and proactive minds to deliver powerful results.

Partnerships

Partnerships are the cornerstone of creativity, innovation, and progress. VA's independent innovation partnership function serves to foster collaboration with the private sector. Collaborating allows VA and the private sector to optimize resources, share technical expertise in a safe environment, and even share intellectual property emerging from the effort. Importantly, the partnership function provides incentives that may help speed the commercialization of federally developed technology.

VACI will be most successful when the innovators and staff from our four components and the competitions work together, sharing ideas and testing solutions. Each must bolster one another. This multi-disciplined – and interlocking – approach to solving problems and improving Veteran satisfaction is, in itself, an innovation at VA. No one person or group has the answer, and by working with innovators and sectors across the country and creating a secure base of innovation, together we are supporting a VA that builds better, stronger service to our Veterans.



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TRACK RECORD AND TRAJECTORY

Mentors at VACI-funded business incubators proudly watch Veterans transform dreams into real companies and products. Developers of artificial kidneys get one step closer to making mobile dialysis a reality. Nurses at Spinal Cord Injury centers witness quadriplegics dial a phone via simple technologies and Skype with their families.

VACI's innovations are impressive advancements in themselves. But the impact these advancements have on Veterans' lives and VA's delivery of care to those Veterans is truly exciting.

VACI sees its focus on improved access, better quality, greater satisfaction, and lower costs reflected in the vendors, startups, scholars and employees who seek to make their ideas realities and whose innovations serve as thanks to our Nation's Veterans. VACI competitions are inclusive – they encourage ideas from diverse, multi-disciplinary populations and fund those with the best promise of success. VACI hosts Employee Competitions, Industry Competitions, Special Projects, and Prize Challenges to find the most current, cutting-edge ideas from across the country, be they from civilian or Veteran, academic or scientist, private sector or public servant.

These challenges attract genius and enthusiasm from every corner of the Nation, netting the most promising innovations to address both emerging and long-standing issues that impact Veterans.

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Employee Competitions

As the second largest department in the Federal government, our extensive, multi-talented workforce totals nearly 320,000 employees – one-third of whom are Veterans and all of whom dedicate their lives to improving the quality of life for Veterans. Since the first employee innovation competition in 2009, employees have submitted more than 15,000 ideas. Those ideas range from new ways to streamline benefits processes to improving health care delivery and new mobile applications to increase access to services. To date, 98 employee innovations are in various stages of design and implementation.

Industry Competitions

The Industry Innovation Competitions marshal creative thinkers and companies outside of government to present new ideas, fresh perspectives, and different approaches to solving problems. Welcoming new ideas from new sources drives our Industry Competitions. We have received 850 submissions and funded 44 industry innovations, culled from the private sector, non-profits, and academia. The 2012 competition received 249 initial proposals in four categories, and 56 of these have been invited to submit further information for funding consideration.

Special Projects

At VACI, we are on assignment to target priority issues for Veterans and improvements to VA. Special Projects allow us to address high-priority challenges in an accelerated manner. VACI has undertaken four of these projects to date: Agent Orange Fast Track System, Open Source Electronic Health Record, Tech Shop Partnership, and Veteran Digital Tutor.

- The Agent Orange Fast Track system quickly processes claims related to the newly expanded presumptive conditions associated with exposure to Agent Orange during service in the Vietnam War.
- The Open Source EHR project shares the source coding and programming language for the Veterans Health Information Systems and Technology Architecture (VistA), the backbone of VA's EHR system, so that programmers can eliminate bugs and develop improved software, allowing for more efficiency, greater transparency, and lower costs.
- VA-TechShop Job Program, a partnership between TechShop and VA, is a membership-based, do-it-yourself workshop and fabrication studio. Veterans have access to machines and digital tools of design, manufacturing, and software, such as CAD/CAM drawing tools. These workspaces, communities, and tools provide the resources necessary to develop marketable job skills and fundamentals for entrepreneurship.

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■ Veteran Digital Tutor, a partnership between VA and the Defense Advanced Research Projects Agency (DARPA), creates next generation education and training tools that facilitate new ways for Veterans to become immediately employable and technically advanced information technology specialists. The project incorporates a 1-year pilot program training 100 Veterans and measuring their effects on economic opportunity.

Prize Challenges

Since the President signed into law the America COMPETES Act in early 2011, we have spearheaded the use of the new prize authority the Act gave VA and other agencies. The bottom line for prize challenges is that we pay for results only. This new tool for Federal agencies taps into a motivated and dispersed community of interest wherever it may be to create novel solutions to challenges that do not readily lend themselves to traditional procurement. We have held three prize challenges so far:

- Badges for Vets, a nationwide competition to create digital "badges" to help Veterans translate their military skills into civilian jobs or to receive advance credit in higher education, sought ways to translate how military training corresponds with academic degrees and job experience. Winners included the Manufacturing Institute, an affiliate of the National Association of Manufacturers, TopCoder, Inc., and Western Governors University.
- Project REACH found new ways for mobile and/or Web applications to help homeless Veterans find resources in their area, such as health care facilities, shelters, and food banks. Five finalists received \$10,000 to develop their applications and compete for a grand prize of \$25,000 awarded to the application that proves the most beneficial for homeless Veterans and the people helping them. Project REACH (Real-time Electronic Access for Caregivers and the Homeless) was developed by VACI in cooperation with Jon Bon Jovi's Soul Foundation, the White House, and the Department of Housing and Urban Development (HUD).
- Blue Button for All Americans expands a once VA-only feature to download personal health records into an application that can be used by all Americans and their care providers. McKesson Corporation's RelayHealth won by installing software in more than 2,000 hospitals for 200,000 physicians, allowing 17 million patients to record health histories, view lab results, track prescription information, and more.

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We are innovating for one sole purpose: improving the lives of Veterans, their families and survivors.

Criteria

Ideas that reach the funding stage have been thoroughly vetted to ensure they are viable and show promise as scalable, real-world solutions. We use the following criteria to evaluate all proposals and submissions:

- The potential impact, benefits, and contributions of the solution to the VA mission areas of interest;
- The quality of the proposed solution design;
- The quality of the proposed implementation plan;
- The scalability of the proposed solution;
- The innovator's capabilities, related expertise/experience, facilities, techniques, or unique combinations of these that are integral factors for the achievement of proposal objectives; and
- The cost-effectiveness of the solution in proportion to its potential impact/benefits.

To learn more about how the competitions are conducted, visit www.innovation.va.gov.

2010 2011 2012

Industry Innovation Challenge Areas

- Telemedicine/telehealth
- New models of dialysis and renal disease treatment
- Innovative housing solutions to address Veteran homelessness
- Integrated business accelerator
- Reducing adverse drug events
- Polytrauma/Traumatic Brain Injury (TBI) solutions

Industry Innovation Challenge Areas

- Teleaudiology
- Enhancements for VA's Blue Button personal electronic health record
- Innovative prosthetic socket designs
- Fully automated sterilization of medical equipment
- Self-management technologies for vocational rehabilitation

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Industry Innovation Challenge Areas

- Enhance maternity continuity of care
- Redesign the Post-Traumatic Stress Disorder (PTSD) treatment experience
- Create mobile applications for benefits information and services
- Prevent pressure ulcers



ON THE HORIZON

We are innovating for one, sole purpose: to improve the quality of life for Veterans, their families, and survivors. Our innovations have raised quality while lowering the cost of VA services, but we are not done. At VACI, we are looking at what lies ahead, recruiting the best people and the strongest ideas and utilizing state-of-the-art tools to continuously improve. It is not enough just to respond to issues; we have to anticipate, plan, and meet our largest challenges head-on.

Trends in technology and health care – combined with advances in research – move at a rapid pace. Staying abreast of this information and looking for ways to incorporate cutting-edge thinking in service and care delivery is critical to VACI. As such, we are looking at ways to incorporate trends into our solutions such as big data, genomics, and advances in materials science.

Big data – or sets of information larger than the usual capacity of software tools – will be important to track in order to analyze products and services and determine how to improve quality and efficiency. These sophisticated analytics allow for informed decision-making and more tailored products and services to meet changing patient and customer needs.

VACI lowers the barrier of entry for innovation at the largest civilian government agency.

Now that we have cracked the code of the human genome, researchers are starting to study large sample populations in the effort to understand who is at risk for disease, key subgroup differences, and treatments that can be most effective. VA's Million Veteran Program (MVP) will establish one of the largest databases of genetic, military exposure, lifestyle and health information. Research findings based on MVP may improve screening, treating, and preventing of illnesses in Veterans. These results can lead to more personalized, preventive health care for all.

Another field promising big results for care is materials science. The goal is to engineer new materials with superior properties, ultimately enabling new devices altogether. For example, materials scientists are testing ways to develop synthetic material to mimic, strengthen, and support parts of our bodies that may have degenerated with age, disease, or trauma. These materials provide hope in the form of electric bandages to promote faster healing of wounds, artificial limbs that sync up with the nervous system, and muscle-powered braces that could enable paraplegics to walk and climb. VACI will look for ways to leverage advancements in materials science to create life-changing products for our Veterans.

VA is known for its size, scope, and diversity of benefits, as well as innovation, responsiveness, and the quality of care it delivers. As technologies advance, we are dedicated not only to staying current, but to setting the pace for using innovative solutions to provide greater access, improved quality, increased satisfaction, and lower costs of VA services.

CASE STUDY

VETransfer Veteran Entrepreneurial Transfer, Inc. Milwaukee, Wisconsin

Challenge Area: Integrated Business Accelerator

The Challenge: Small businesses are vital to the U.S. economy, employing more people and driving more activity than any other business type. Yet 50 percent of small businesses fail in their first year due to a number of reasons, including lack of experience, insufficient capital, and poor inventory management. The skills and experience the military provides can uniquely position Veterans for entrepreneurship.

With dedication, problem solving and management engrained into the military mind, Veterans come prepared for the intensity of owning a business. However, as with any entrepreneur, taking the next step and starting a business can require specific training and a boost of support, and many Veterans may need help adapting their military skills specifically for the business world. For Veterans on a mission to start their own businesses, where can they seek training and mentorship, and how can they learn to translate their skills to new industries?

The Solution: VETransfer, funded by VACI, provides a business accelerator for entrepreneurial-minded Veterans. VETransfer offers individualized mentorship, an educational facility and online courses, and access to resources that help Veterans become entrepreneurs. VETransfer channels the strategic thinking and perseverance of Veterans into business sense.

VETransfer provides Veterans with a process to transform their ideas into reality – one that combines business-building fundamentals with the flexibility and ingenuity to evolve with changing marketplaces. Veterans apply to VETransfer, whose seasoned executives review each applicant, the sustainability of an idea, the status of company development, and the business proficiency of the entrepreneur. Whether a Veteran approaches VETransfer with a nascent concept in need of nurturing or a pre-existing business hoping for a boost to the next level, VETransfer offers tailored guidance to accelerate each entrepreneur's dream.

In addition, VETransfer's virtual component, DropZone, provides Web courses, a library of resources, networking capabilities, and a digital vehicle for continued mentorship. This online element expands VETransfer's reach to Veterans throughout the world and increases access to vital business resources.

VETransfer not only helps Veterans launch their own businesses, but continues to make sure that they stay on a trajectory to success.

Featured Businesses:

- Illumatek After being struck while driving his Harley, Marine John Miller was inspired to invent illuminated windshield engravings, visible at night from up to five miles.
- Celebritunity Marine A-Sun Truth began a brand management agency for celebrities, such as Judge Joe Brown, Wesley Snipes, and Magic Johnson.
- Flexible Fuel Combined Heat and Power System (FF-CHP) – After retiring from the Navy, Texas native Jeremy Anderson studied engineering and is helping rural communities adopt renewable energies and sustainable energy production techniques.

Next Steps: To continue its mission, VETransfer is scaling nationwide, partnering with other entrepreneurial sites to create a sole business resource and to establish other tutoring centers. "Every day we change the lives of Veterans, and that's a great feeling," says VETransfer CEO, Co-founder and Vietnam Veteran Ted Lasser.

CASE STUDY

Automated Wearable Artificial Kidney (AWAK) AWAK Technologies Seattle, Washington

Challenge Area: New Models of Dialysis and Renal Disease Treatment

The Challenge: More than 10,000 Veterans undergo dialysis treatment for end stage renal disease (ESRD), and approximately 3,000 additional Veterans reach ESRD every year. Dialysis is a costly treatment, in terms of dollars and time spent for the patient treatment. For Veterans who live in rural areas, treatment several times a week at a VA or VA contracted medical center can pose serious issues in terms of transportation and extended wait times at these facilities. Despite these challenges and disruptions to a patient's life, the medical necessity of dialysis for ESRD Veterans is constant – it is life saving treatment that a patient cannot go without.

The Solution: AWAK allows Veterans to receive continuous peritoneal dialysis via a small (approximately 3 lbs.) wearable device. This mechanism more accurately mimics kidney function than traditional dialysis, resulting

in enhanced care and better health. While AWAK improves the numbers in patients' charts, it also enriches quality of life, providing a dialysis treatment that is as mobile and independent as the Veterans themselves.

Instead of the traditional, periodic dialysis treatment, the AWAK continuously removes toxins and water from the blood. This round-the-clock dialysis steadies metabolic and fluid states, eliminating the peaks and plummets between episodic dialysis appointments. This equilibrium makes patients feel better, as AWAK "applies a more consistent bandage to your system and improves your prospects of life," says program manager Clint Latimer.

With need for only two 30-minute interruptions to change cartridges and remove ultrafiltrate, Veterans have more freedom to go about their daily lives. AWAK reduces the need for appointments, medications, and dietary and travel restrictions. Consequently, VA medical centers can decrease the cost of staffing and equipment maintenance. This is particularly important for regional facilities that have been designated for dialysis. Ultimately, VA Centers will have more room – both in space and schedule – for other patients. But most importantly, it can improve the quality of life significantly for a patient.

AWAK is easy to use and the portability, usability, and betterment of care that it provides foreshadows self-dialysis as a staple within the ESRD home – not just with the Veteran community, but with the more than half a million people in the U.S. with ESRD. As Margaret Hannon, Acting Director of Operations in VA's Office of Research and Development, recounts, "So many Veterans have called to inquire [about AWAK]; I think it will certainly be a life-changer for thousands."

Next Steps: Since receiving funding from VA, the artificial kidney has undergone various stages of development. Chemicals have been tested both inside and outside the apparatus, and the mechanism itself has already been refined into a smaller, lighter version. The testing at VA medical centers began in 2012 and will continue through 2013 to validate safety and efficacy, and the device will eventually need to undergo the Fedral Drug Administration approval process.

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Environmental Controls Memphis VA Medical Center Memphis, Tennessee

Challenge Area: Spinal Cord Injury

The Challenge: More than 42,000 Veterans live with spinal cord injuries (SCI) in the United States. In fact, roughly 16 percent of all Americans living with SCI are Veterans, and many of these Veterans receive rehabilitation at one of VA's 24 SCI centers. Although the severity of these injuries may vary, often these Veterans become quadriplegics or paraplegics and face the challenges associated with transitioning to civilian life with physical limitations.

The Solution: Environmental control beds for patients in an SCI unit grant Veterans greater control in their lives. These simple bedside technologies enable Veterans to adjust bed positions, flip on the lights, change the TV channel, or dial a phone. Patients can now perform these actions independently, without the assistance of a nurse, transforming the impossible task into an everyday motion. Each bed is equipped with an environmental control unit that has "arms," which hold a microphone, sip and puff straw, TV, and tablet interface. By using voice activation, breath and

suction, eye pupil movement, and toggle switches, these devices act as an extension to the body. As a result, patients in the SCI units can control their environments, and nurses can dedicate more time to patient care activities. Because these devices are fairly straightforward, both Veterans and nurses find them easy to learn and use.

While environmental controls empower disabled Veterans with increased self-sufficiency, it also improves their quality of life. For the first time, these technologies pair clinical needs with personal entertainment. Now disabled Veterans can surf the Internet, read eBooks, and update their Facebook pages. "One of the Veterans' favorite elements is the Skype function," reports Chief Biomedical Engineer Sheena House, whose dedicated pursuit to create these technologies was made possible largely by VACI funding. "Many of these Veterans are far away from home, and now they can communicate and see their families at the same time. Patients keep asking me if they can be the next one to test the bed."

Next Steps: After initial usability testing of two beds, 58 new beds are being installed in the Memphis SCI Center. Each bed can be personalized for the patient's abilities, and confidential data can be removed from the devices once the patient is discharged. Due to

the ease of use and amalgamation of tools, these technologies can be easily implemented into SCI centers and eventually the home. Environmental control units are improving the lives of Veterans who have been impacted.

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CASE STUDY

Open Source Electronic Health Record Modernization OSEHRA Washington, DC

Challenge Area: Electronic Health Record (EHR)
Modernization

The Challenge: VA manages the largest integrated health network in the country, providing care to more than 6 million Veterans, and operating more than 150 hospitals, 800 clinics and 135 skilled nursing facilities. VA's EHR, called Veterans Health Information Systems and Technology Architecture (VistA), is the electronic information service that is central to the quality of care that VA delivers on this large scale. As VA's clinicians and researchers advance and improve models of care at an increasing rate and across a spectrum of treatment, the rate of innovation in VistA to support these clinical advances is increasingly difficult to maintain.

While derivatives of VistA are used in non-VA government health care, by the Departments of Defense (DoD) and Health and Human Services, and in multiple private sector settings, there is no mechanism for sharing improvements between versions or for collaboration among VistA users and developers. This unnecessary isolation has a damping effect on the rate of EHR innovation and prevents the full potential of VistA from being reached.

The Solution: Open source models have demonstrated success in multiple applications and markets by enabling a broad range of participants to collaborate effectively. VA recognized that the creation of a robust open source community required the establishment of a custodial agent, or central governing body, to organize the community and catalyze its growth. Recognizing that no such body then existed, VACI provided the leadership and direction that resulted in the independent establishment of the Open Source Electronic Health Record Agent (OSEHRA) in late 2011.

OSEHRA provides the foundation for an open and collaborative community of developers, researchers, and users engaged in advancing EHRs and related technology, supporting the clinical advances promoted by VA and by health care providers and networks globally. In operation for less than a year, OSHERA now has more than 1000 members representing more than 120 organizations from the public and private sectors and academia. Technical operations, including a code repository, certification tests, development tools, and collaboration aids have been established. Work groups have been launched, allowing full community participation in a number of important projects and activities:

- VistA refactoring, which reorganizes the code to make it easier to maintain and develop new applications.
- Code convergence, to establish a common core codebase and make sharing of innovations easier to achieve.

- Web services development, which provides modern programming interfaces for the rapid creation of new applications.
- The update of VA's My HealtheVet platform, that supports greater exchange of patient health information.

"The open source model provides much more innovation by allowing a wide variety of people and organizations to apply their particular expertise for the common good," said Mike O'Neill, senior advisor to the VACI Director and VA liaison to OSEHRA. "And at the end of the day, these innovations directly impact the care we are able to deliver to Veterans."

Next Steps: OSEHRA is deeply engaged in working with VA and other community members to modernize VistA, establishing a common core codebase throughout VA and across industry while improving the programming interfaces that developers will use to rapidly build new VistA-based applications. As VA and DoD continue the design and development of a joint and integrated electronic health record, OSEHRA provides the means for implementing an open standards and open source software approach to the creation of a next-generation EHR. And OSEHRA will continue its support for the longerterm objective to enable a commercial market based on open source EHR software, allowing national and international health care to benefit from the outcomeimproving impact of VistA and increasing the innovation pool that can provide benefit back to VA.



BY THE NUMBERS

Since the establishment of the Innovation Initiative in the spring of 2010, VA has funded 135 innovations, for just over \$100M.







CONCLUSION

Our Nation's Veterans sacrificed for this country. From the moment they raise their right hand, VA supports them from that day forward. Just as we were confident in the protection they gave our country, they must be confident that the care and benefits they receive are delivered efficiently and enhance their quality of life.

At VACI, we have a special assignment in serving our Veterans, and the evolution of the organization reflects our progress to date. Establishing VACI symbolizes VA's commitment to accountability, transparency and proactive improvement of our care to Veterans. The innovations we have funded demonstrate how we are helping Veterans by providing greater access, better quality, increased satisfaction, and lower costs of VA services. By instituting VACI as a permanent organization, complete with a dynamic portfolio, fellows programs, an online network, and a partnership function, we are ensuring that VA continues its pursuit of the very best for our Veterans.

Our mission is to discover new ways that we as a Nation can keep our solemn commitment to Veterans, but we know we can not fuel such an ambitious goal without the cutting-edge creativity that lives among our employees and within the private sector. That is why VACI competitions are open to anyone – whether inside or outside the government. Veterans served all of us. Now, it is our turn to ensure that they are provided with the care and benefits they have earned. Serve your country, too, even if you never wear a uniform. Learn about our opportunities by visiting us at www.innovation.va.gov.

APPENDIX COMPLETE LISTING OF VACI PORTFOLIO PROJECTS

INDUSTRY INNOVATIONS					
Title	Topic	Company	Pilot City, State	Company City, State	Year
Mobile Blue Button	Enhancements and Novel Uses of VA's "Blue Button" Personal Health Record	Agilex	Washington, DC; Chillicothe, Ohio; Palo Alto, California; North Chicago, Illinois	Chantilly, Virginia	2011
Blue Button Extensions Medical Imaging	Enhancements and Novel Uses of VA's "Blue Button" Personal Health Record	Ray Group International	Washington, DC	Washington, DC	2011
Blue Button Authentication Field Test Proposal	Enhancements and Novel Uses of VA's "Blue Button" Personal Health Record	Northrop Grumman	Washington, DC	McLean, Virginia	2011
Pro-Active Dynamic Accommodating Prosthetic Socket	Innovative Prosthetic Socket Designs to Improve Fit and Comfort of Prosthetics	Infoscitex	Waltham, Massachusetts	Waltham, Massachusetts	2011
Synergetic Improvements for Transfemoral Prosthetic Sockets	Innovative Prosthetic Socket Designs to Improve Fit and Comfort of Prosthetics	Ohio Willow Wood Company	Cleveland, Ohio	Mt. Sterling, Ohio	2011
Quasi-Passive Prosthetic Socket Technology with Optimal	Innovative Prosthetic Socket Designs to Improve Fit and Comfort of Prosthetics	Massachusetts Institute of Technology	Boston, Massachusetts	Cambridge, Massachusetts	2011
SOCAT: Socket Optimized for Comfort with Advanced	Innovative Prosthetic Socket Designs to Improve Fit and Comfort of Prosthetics	Florida State University	Gainesville, Florida	Tallahassee, Florida	2011
Iowa Center of Veteran Excellence	Self-Management Technologies for Vocational Rehabilitation	University of Iowa	Iowa City, Iowa	Iowa City, Iowa	2011
Automated Integrated Perioperative Process	Fully Automated Sterilization of Medical Equipment	GE Global Research	Orlando, Florida	Niskayuna, New York	2011
Technical Feasibility of Smartphone Based Teleaudiology	Leveraging Telemedicine to Provide Audiology Services to Remote Veterans	Phonak	Cleveland, Ohio	Warrenville, Illinois	2011
RemotEAR	Leveraging Telemedicine to Provide Audiology Services to Remote Veterans	Otovation, LLC	Los Angeles, California	King of Prussia, Pennsylvania	2011

INDUSTRY INNOVATIONS					
Title	Topic	Company	Pilot City, State	Company City, State	Year
Remote Audiometry in VA CBOCs	Leveraging Telemedicine to Provide Audiology Services to Remote Veterans	Audiology, Inc.	Nashville, Tennessee	Arden Hills, Minnesota	2011
Cochlear Implant Programming	Leveraging Telemedicine to Provide Audiology Services to Remote Veterans	Cochlear Americas	Seattle, Washington	Centennial, Colorado	2011
Business Incubator Facility	Integrated Business Accelerator	VETransfer	Milwaukee, Wisconsin	Milwaukee, Wisconsin	2010
VetSuccess Employment Accelerator (VetSEA)	Integrated Business Accelerator	Halfaker & Associates	Roanoke, Virginia	Arlington, Virginia	2010
Education for Veteran Entrepreneurs	Integrated Business Accelerator	Eadvantage	Washington, DC	Potomac, Maryland	2010
Adverse Drug Event Trigger Tool	Reducing Adverse Drug Events	Southwest Research Institute (SwRI)	Cincinnati, Ohio	Houston, Texas	2010
TheraDoc	Reducing Adverse Drug Events	DSS	Dallas, Texas; Houston, Texas; San Antonio, Texas; Kansas City, Missouri; Chicago, Illinois	Juno Beach, Florida	2010
Sentri7	Reducing Adverse Drug Events	Pharmacy OneSource	Los Angeles, California	Seattle, Washington	2010
Dynamic PharmacoVigilance System	Reducing Adverse Drug Events	Vigilanz	Chicago, Illinois	Minneapolis, Minnesota	2010
Automated Wearable Artificial Kidney (AWAK)	New Models of Dialysis and Renal Disease Treatment	AWAlas. Technologies	Seattle, Washington	Burbank, California	2010
CKD Buddy	New Models of Dialysis and Renal Disease Treatment	Medical Education Institute	West Haven, Connecticut	Madison, Wisconsin	2010
Comprehensive National Kidney Disease Registry	New Models of Dialysis and Renal Disease Treatment	University of Michigan	Ann Arbor, Michigan	Ann Arbor, Michigan	2010
Advanced Care Management	New Models of Dialysis and Renal Disease Treatment	American TeleCare	Minneapolis, Minnesota	Minneapolis, Minnesota	2010
Gordon H. Mansfield Veterans Community	Addressing Veteran Homelessness via Innovative Housing Technology	Soldier On	Northampton, Massachusetts	Leeds, Massachusetts	2010

INDUSTRY INNOVATIONS						
Title	Topic	Company	Pilot City, State	Company City, State	Year	
Field Test of Modular Housing	Addressing Veteran Homelessness via	Ridgewood Technology	Salem, Virginia	Ashburn, Virginia	2010	
Solution	Innovative Housing Technology	Partners				
TBI Toolbox	Improvement of Polytrauma Care	MedRed	Richmond, Virginia	Washington, DC	2010	
Remote Blood Glucose Data Collection	Telehealth	SweetSpot Diabetes Care	Dayton, Ohio	Dayton, Ohio	2010	
Cardiology Communication System	Telehealth	mVisum	Washington, DC	Camden, New Jersey	2010	
Agile iHealth	Telehealth	Agilex	Washington, DC	Chantilly, Virginia	2010	
Patient-Centered Collaborative Management of Chronic Pain and Depression	Telehealth	Interactive Performance Technologies	West Haven, Connecticut; Indianapolis, Indiana	Cambridge, Massachusetts	2010	
IntelaCare Support for TBI	Telehealth	Affinity	Palo Alto, California	Arlington, Virginia	2010	
Predictive Analytics for Mobile Telehealth	Telehealth	Venture Gain Bioinformatics (VG-Bio)	Salt Lake City, Utah	Naperville, Illinois	2010	
CareConnect	Telehealth	Magpie	Portland, Oregon	Denver, Colorado	2010	
Online Care	Telehealth	American Well	Minneapolis, Minnesota; Omaha, Nebraska	Boston, Massachusetts	2010	
Telerehabilitation	Telehealth	Kinetic Muscles	Atlanta, Georgia	Tempe, Arizona	2010	
Mobile eScreening for OEF/OIF Mental Health Assessment	Telehealth	Service Wing Healthcare	San Diego, California	San Diego, California	2010	

EMPLOYEE INNOVATIONS					
Title	Topic	City, State	Innovator	Year	
Veteran "X" (Peer-Led Mental Health Recovery Program)	Patient Centered Care	Hampton, Virginia	VHA Employee	2012	
SPD Scanners for Medical Supplies /Equipment Check out	Facilities Management	Biloxi, Louisiana	VHA Employee	2012	
SCI Home Care RN's: CVT for Triage and Acute Issues Management	Access	Richmond, Virginia	VHA Employee	2012	
Remote Ambulatory Management of Veterans with Sleep Apnea	Patient Centered Care	Philadelphia, Pennsylvania	VHA Employee	2012	

Fitle Fitle	Topic	City, State	Innovator	Year
Preventing Missed Opportunities in the Timely Diagnosis of Lung Cancer	Patient Centered Care	San Diego, California	VHA Employee	2012
Postage Cost Through Combined Ordering and Shipping of Medications Supplies	Systems Redesign	Indianapolis, Indiana	VHA Employee	2012
Patient Test Results Reporting System	Medical and Surgical Specialty	Atlanta, Georgia	VHA Employee	2012
Patient Aligned Care Team Phone Message Manager Tool	Mental Health Specialty	Madison, Wisconsin	VHA Employee	2012
Paperless Future Technologically Savvy Veterans	Systems Redesign	Boise, Idaho	VHA Employee	2012
One VA Pharmacy	Patient Centered Care	Colorado Springs, Colorado	VHA Employee	2012
On Boarding	Medical and Surgical Specialty	Oklahoma City, Oklahoma	VHA Employee	2012
Modernized Progress Note Templates	Systems Redesign	Jacksonville, Florida	VHA Employee	2012
Mobile App for Federal Benefits Booklet	Access	Washington, DC	VHA Employee	2012
Meditation & Relaxation Program: Mental Health Primary Care Integration	Patient Centered Care	Sepulveda, California	VHA Employee	2012
mproved Veteran Access to an Innovative Treatment of TAAA	Systems Redesign	Martinez, California	VHA Employee	2012
Home Based Telemental Health	Patient Centered Care	Portland, Oregon	VHA Employee	2012
Hazardous Pharmaceutical	Systems Redesign	St. Louis, Missouri	VHA Employee	2012
Enable Schedulers to Preview Edit and Send Appointment Letters Electronically	Access	Prescott, Arizona	VHA Employee	2012
Education at the Point of Care	Medical and Surgical Specialty	Buffalo, New York	VHA Employee	2012
Digital Fax Servers	Systems Redesign	Tuscon, Arizona	VHA Employee	2012
Complementary & Alternative Mind/Body Practices for treatment of Post Fraumatic Stress Disorder and other Mental Health Disorders	Systems Redesign	Orlando, Florida	VHA Employee	2012
Automated Hiring Packets	Mental Health Specialty	San Antonio, Texas	VHA Employee	2012
Appointment Cancellation in MyHealtheVet	Facilities Management	Harlingen, Texas	VHA Employee	2012
Add OncoTrax Cancer Data Tables to Corp Data Warehouse	Medical and Surgical Specialty	North Little Rock, Arkansas	VHA Employee	2012
/eterans Health Education	Mental Health Specialty	Long Beach, California	VHA Employee	2011
/et-to-Vet: A Recovery Model Meals-on-Wheels Pilot Program	Mental Health Specialty	Gainesville, Florida	VHA Employee	2011
/A-IDEA	Mental Health Specialty	Indianapolis, Indiana	VHA Employee	2011
Jsing Vacated or Unused Federal Buildings for Homeless Veterans	Patient Centered Care	Muskogee, Oklahoma	VHA Employee	2011
Jse of Creative Arts in Mental Health Recovery	Veteran Homelessness	Tampa, Florida	VHA Employee	201

Title	Topic	City, State	Innovator	Year
Surgical Implant Tracking/Costing	Patient Aligned Care Team	Washington, DC	VHA Employee	2011
SSN Removal in VistA	Patient Aligned Care Team	Los Angeles, California	VHA Employee	2011
Special Care Units / Dementia Care Units	Mental Health Specialty	Wilkes-Barre, Pennsylvania	VHA Employee	2011
Radiology Order Entry Interface	Patient Aligned Care Team	Duluth, Georgia	VHA Employee	2011
Overhaul of the Travel Pay Systems	Systems Redesign	Cleveland, Ohio	VHA Employee	2011
Noise Reduction - Call Light / TV Remote Update	Systems Redesign	Los Angeles, California	VHA Employee	2011
My HealtheVet Enhancements Now!	Patient Centered Care	Loma Linda, California	VHA Employee	2011
My HealtheVet Application for Use on Mobile Devices	Access	Canandaigua, New York	VHA Employee	2011
Mentors for VetSuccess Veterans	Improvements to Vocational Rehabilitation & Employment Service	Lincoln, Nebraska	VBA Employee	2011
Mental Health First Aid	Improvements to Vocational Rehabilitation & Employment Service	Lincoln, Nebraska	VBA Employee	2011
Let's Move! The Weight Is Over	Systems Redesign	Mare Island, California	VHA Employee	2011
nsulin Pens	Systems Redesign	Fort Harrison, Montana	VHA Employee	2011
mproving Rx Safety	Patient Aligned Care Team	Charleston, South Carolina	VHA Employee	2011
HI2 Establishment of Regional Informatics Training Centers	Systems Redesign	Tucson, Arizona	VHA Employee	2011
Healing Touch + Guided Imagery for PTSD in Vet Centers	Mental Health Specialty	Oklahoma City, Oklahoma	VHA Employee	2011
Handsfree Bathrooms	Systems Redesign	Louisville, Kentucky	VHA Employee	2011
Hand Hygiene InfoPath Monitoring	Systems Redesign	Boston, Massachusetts	VHA Employee	2011
Environmental Controls	Systems Redesign	Memphis, Tennessee	VHA Employee	2011
Email Improvement - Eliminate Duplicates - Forwarding Reliance	Veteran Homelessness	Boston, Massachusetts	VHA Employee	2011
Detail Successors Prior to Retirement	Systems Redesign	Northport, New York	VHA Employee	2011
Debit Cards for Books and Supplies	Improvements to Vocational Rehabilitation & Employment Service	Boston, Massachusetts	VBA Employee	2011

Title	Topic	City, State	Innovator	Year
Crisis Line Number on Prescription Bottles, Caps, Labels	Patient Centered Care	Orlando, Florida	VHA Employee	2011
CPRS Education & Training - Building Upon the Innovation Sandbox	Systems Redesign	Providence, Rhode Island	VHA Employee	201
Companion Dogs for Veterans	Access	Orlando, Florida	VHA Employee	2011
Career Enhanced Internship Program	Improvements to Vocational Rehabilitation & Employment Service	Providence, Rhode Island	VBA Employee	2011
Better Mental Health Scheduling	Access	Chicago, Illinois	VHA Employee	2011
AutoBasic Eligibility	Improvements to Vocational Rehabilitation & Employment Service	Manchester, New Hampshire	VBA Employee	2011
"VetSuccess on Campus" Services for TBI/PTSD Veterans	Systems Redesign	Albuquerque, New Mexico	VBA Employee	2011
Wireless Voice Communications with Hands-Free Options	Systems Redesign	Martinsburg, West Virginia	VHA Employee	2010
Veterans Interactive Online Assistant	Improvements to Disability Claims Processing	Hartford, Connecticut	VBA Employee	2010
Veteran Online Tracking of Mail Prescription Delivery	Access	Leavenworth, Kansas	VHA Employee	2010
Veteran Interviews and DVD	Improvements to Disability Claims Processing	Albuquerque, New Mexico	VBA Employee	2010
VA-Wide Core Collection of Knowledge Based Information Resources	Patient Centered Care	Cincinnati, Ohio	VHA Employee	2010
Touch Screen Nursing Triage of Patients	Medical and Surgical Specialty	San Diego, California	VHA Employee	2010
Suicide Hotline: Be a Hero, Save a Hero	Systems Redesign	Cincinnati, Ohio	VHA Employee	2010
SMC Calculator	Improvements to Disability Claims Processing	San Diego, California	VBA Employee	2010
Show Patient Picture in CPRS	Mental Health Specialty	Northport, New York	VHA Employee	2010
Share Verified Insurance Info via Use of the Master Patient Index	Patient Centered Care	Albany, New York	VHA Employee	201
Search Function in CPRS	Patient Centered Care	Gainesville, Florida	VHA Employee	201
Scan and Store Digital images	Improvements to Disability Claims Processing	St. Louis, Missouri	VBA Employee	201

EMPLOYEE INNOVATIONS				
Title	Topic	City, State	Innovator	Year
Rules-Based Processing for Pension/Dependency	Improvements to Disability Claims Processing	St. Paul, Minnesota	VBA Employee	2010
Revised Performance Standards for VSRs	Improvements to Disability Claims Processing	Togus, Maine	VBA Employee	2010
Reducing Health Care Associated Infections Using Informatics	Systems Redesign	West Haven, Connecticut	VHA Employee	2010
Reduce Unnecessary/Duplicate Lab Tests by Rules-based Algorithms	Patient Centered Care	Tucson, Arizona	VHA Employee	2010
Rapid Evaluation of Claims	Improvements to Disability Claims Processing	Atlanta, Georgia	VBA Employee	2010
Physician Templates – Disability-Based Questionnaires	Improvements to Disability Claims Processing	Pittsburgh, Pennsylvania	VBA Employee	2010
Online Radiology Protocoling Tool Integrated Within CPRS/VistA	Systems Redesign	Seattle, Washington	VHA Employee	2010
MAP-D Live	Improvements to Disability Claims Processing	San Diego, California	VBA Employee	2010
ntegration of Behavioral Health Lab & CPRS for Mental Health Care	Systems Redesign	Philadelphia, Pennsylvania	VHA Employee	2010
mproved Access to Military Personnel Records	Systems Redesign	Orlando, Florida	VHA Employee	2010
nhance Emergency Medical Response Team Communication	Systems Redesign	Little Rock, Arkansas	VHA Employee	2010
Discharge Pilot Program	Mental Health Specialty	White River Junction, Vermont	VHA Employee	2010
Disability Narrative Text Tool	Improvements to Disability Claims Processing	Phoenix, Arizona	VBA Employee	2010
PRS-Based Automated Queries and Reports	Systems Redesign	Dallas, Texas	VHA Employee	2010
PRS Enhancement for Veteran-Centered Care	Systems Redesign	Augusta, Maine	VHA Employee	2010
rief Resident Supervision Index	Access	Loma Linda, California	VHA Employee	2010
augment CPRS with Standards-Based Decision Support Engine	Systems Redesign	Boston, Massachusetts	VHA Employee	2010
Accessible Contact Information for All Assigned Care Providers	Systems Redesign	Dallas, Texas	VHA Employee	2010

PRIZE CHALLENGES					
Title	Winner	Year			
Project REACH	Unknown at the time of printing	2012			
Blue Button for All Americans	Relay Health	2011			
Badges for Vets	TopCoder, National Association of Manufacturers, Western Governors University	2011			

SPECIAL PROJECTS						
Topic Area	Company	Pilot Location	Year			
Veteran Economic Opportunity	TechShop	Philidelphia, Pennsylvania; Detroit, Michigan; San Jose, California	2012			
Veteran Economic Opportunity	Acuitus, DARPA	Palo Alto, California	2012			
EHR Modernization	OSEHRA	Washington, DC	2011			
Automate the Claims Process	IBM	Washington, DC	2010			



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