

# VISION

*for Excellence*

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SPOTLIGHT ON  
**RESEARCH**



# DIRECTOR'S VISION



Dear Veterans, fellow employees, volunteers and friends of VISN 4:

This issue of *Vision for Excellence* shines the spotlight on the achievements of VISN 4 researchers and the roles they play both in providing high quality care for Veterans and advancing medical science. I am excited about this opportunity to educate you all about the research conducted in our facilities. VA research has a far-reaching impact on treating and preventing disease and disability.

As part of the United States' largest integrated health care system, VA research has unique opportunities to address some of the most critical issues in health care today. Yes, the focus is on improving the lives of Veterans, but, in the end, it will improve the lives of everyone.

From research on tuberculosis in the 1940s, to today's developments in advanced robotic prosthetics, VA is ranked as one of the Nation's leaders in health research. VISN 4 currently has research programs located in Clarksburg, Coatesville, Philadelphia, Pittsburgh, and Wilkes-Barre.

## Specialized research centers of excellence include the:

- Center for Health Equity Research and Promotion – Pittsburgh & Philadelphia
- Center of Excellence for Substance Abuse Treatment and Education – Philadelphia
- Geriatric Research, Education and Clinical Center – Pittsburgh
- Human Engineering Research Laboratory – Pittsburgh
- Mental Illness Research, Education and Clinical Center – Pittsburgh & Philadelphia
- Parkinson's Disease Research, Education and Clinical Center – Philadelphia

Our newest research center is the Center for Evaluation of Patient Care Teams. Keep reading to learn more about each of these VISN 4 research centers.

I would like to express my gratitude to all VISN 4 researchers, who strive for and achieve the highest level of excellence. I would also like to express my appreciation to all of the men and women who have served and are currently serving their Nation again by participating in VA research. Without their cooperation, the achievements of our researchers would not be possible.

Sincerely,

**MICHAEL E. MORELAND, FACHE  
NETWORK DIRECTOR**

Dr. Rory Cooper, a senior VA research career scientist, and Director Moreland following the autumn dedication of VA Pittsburgh Healthcare System's new research office building.

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# AROUND the NETWORK



VA Butler Social Worker Sandy Beahm provides care for U.S. Army Veteran J. Anthony Cazzell during a Clinical Video Telehealth session.

## Telehealth and Hope for Tomorrow

VA Butler Healthcare is reaching out to homeless Veterans in every way it can – even through a computer.

Ten Veterans residing in contract housing called Tomorrow's Hope now receive individualized case management without traveling from their temporary home to the Butler VA hospital.

Veterans who reside at the facility already receive counseling and education support. Now, through a computer installed at the facility, these Veterans receive daily follow up to review their goals and talk about their plans for the future. Their VA social worker also ensures these Veterans are adjusting to the facility well, and can resolve their problems or concerns.

This spring, VA Butler Social Worker Sandy Beahm conducted the first Clinical Video Telehealth session with U.S. Army Veteran J. Anthony Cazzell.

*It was wonderful being able to see and hear her without having to travel to Butler. Saving on driving time is great, and it's better than just talking over the phone since you can see who you are talking to.*

**J. Anthony Cazzell, U.S. Army Veteran**

## Earth Day Remembrance

Wilmington VA Medical Center kicked off a new tradition this Earth Day.

The hospital plans to recognize each Delaware Medal of Honor recipient with a living memorial on the grounds – a tree and a dedication plaque. The first honoree to be so recognized is U.S. Army Sgt. William Lloyd Nelson, a World War II Veteran killed in action while leading his men in Tunisia on April 24, 1943.

Paul Cathell, Delaware Medal of Honor Historical Association President and a former Marine, participated in the event. "It was a great idea to choose Sgt. Nelson to be the first candidate," he said.

## Rediscovering Peace

Amber Blanton is a combat Veteran and single mother. After losing her husband in combat during Operation Enduring Freedom, she grieved for years – and finally found peace at the Lebanon VA Medical Center.

"The doctors and nurses at Lebanon – everyone really – has helped me so much," Blanton says. "They always put you first. There's always a feeling of camaraderie with other Veterans, regardless of age. At VA, you are still a soldier and that is nice."

Bill Dangro spent 33 months in a communist prisoner of war camp during the Korean War. At 20 years old, he had to dig a bullet out of his knee himself and couldn't raise his arm due to a shoulder wound. His father died during his imprisonment. After years of living in constant mental and physical pain from his imprisonment, the Lebanon VA helped him enjoy his life again.

"When I came to the Lebanon VA, I was nearly a vegetable. I had been somewhere else and the care was non-existent. People there just didn't care. But here, the folks really care about you. There's always something to do. If there's a better place out there, I'd like to see it – because nothing beats the Lebanon VA."





Altoona VA employees participate in the third annual VA2K.

## Promoting Employee Wellness to Benefit Homeless Veterans

The third annual VA2K “walk and roll” event was held at VAs nationwide on May 15, 2013. The event, in which participants travel approximately 1.2 miles (2 kilometers), focuses on the advantages of physical activity and benefits homeless Veterans.

At the James E. Van Zandt VA Medical Center in Altoona, Pa., more than 143 people participated in the event. The hospital raised more than \$3,300 in cash and supplies, including cleaning products and personal care items. Altoona focused on awareness of homeless female Veterans by selling t-shirts that reminded everyone that women wear combat boots, just like men – and can find themselves homeless like men.

## A Golden Opportunity for Learning

The Golden Brain Bank, located at the Coatesville VAMC, is a repository for 350 human brains donated by Veterans or their families that have been frozen or otherwise preserved after the Veterans’ deaths. Parts of the repository were shown to approximately 100 VA health care professionals during Research Week 2013.

“We showed people pathological samples that demonstrated the physical manifestation of some of the diagnoses they see in their patients every day,” explained Dr. Heather Basehore, principal investigator for the Brain Bank. “It gave them an extremely rare glimpse of what it really means to have a tumor or a stroke.”

As part of her demonstration, Basehore showed a brain taken from a patient who passed away with end-stage Alzheimer’s

disease, and compared it with the brain of another person of the same age. “There’s no missing the impact of the drastically reduced size and shrunken appearance of the Alzheimer’s brain,” she tells us.

When not being used to educate health care workers, the brain tissue is an important resource for VA researchers. Seventy percent of those whose brains were donated to the Brain Bank had Alzheimer’s disease or dementia of some kind during their lives. Others had diagnoses including Parkinson’s disease, schizophrenia, and schizoaffective disorders.

*I’m eager to spread the word to VA health care professionals that there is tissue available for studies*

**Dr. Heather Basehore,**  
Brain Bank Personal Investigator







Innovative, new multi-sensory room at Wilkes-Barre VA

## A Room That Makes A Difference

Amie Dorney, a recreation therapist at Wilkes-Barre VA Medical Center, recently won VA's Employee Innovation Initiative, a competition that allows VA to tap the ingenuity and innovative spirit of employees.

Dorney received a \$150,000 grant to improve care for dementia patients in Wilkes-Barre's Community Living Center. Dorney used the grant to create VA's first "multi-sensory" room and improve training for staff.

The room includes bubble tubes, sound- and touch-activated interactive wall panels, and projection screens showing a variety of peaceful scenes. A comfortable chair gently massages Veterans in synchronization with music they choose. The goal of the room is to provide Veterans with a sense of control over their environment and calm them down when they are agitated. Due to its success, VA is now emulating this room at additional VA facilities.

The training involves a daylong program for staff on how to recognize the five stages of dementia, and how to treat them. Wilkes-Barre also offers a "virtual dementia tour," involving the use of special goggles, headphones, and hand and gait restrictions to give staff a first-hand understanding of dementia patients' experience.

## To Lead and Serve

**Clarksburg** | Denise Boehm

Associate Director for Patient Care Services  
since October 21, 2012

### 15 YEARS OF VA SERVICE

*I am very excited about this opportunity to play a key role in marshaling upper management support, resources, and cooperation with other disciplines and hospital departments to improve care processes on the front line.*



## Redesigning Patient-Centered Care



Throughout the Erie VA Medical Center, teams are redesigning processes to improve access, customer service, and patient-centered care.

The Erie VA pharmacy is one such team. To improve the patient experience, the team pulled together call center staff and primary care staff to address communication issues and develop a better process for ordering and preparing prescriptions for pickup. With a better internal communication process now in place, patient prescriptions are ready for pickup with little to no waiting, and patient satisfaction has improved significantly.

A recent redesign of the main pharmacy counseling room has provided patients with easier access to pharmacy technicians and pharmacists. Ideas for the redesign came from both staff and feedback from Veterans. The counseling room door was widened for easier wheelchair access; the room setup was changed so both Veterans and their families could fit comfortably while consulting with pharmacy staff, and hallway congestion outside the pharmacy was eliminated. As a result, patients have easier access and shorter wait times.



*They realize status quo isn't good enough. They're changing health care so services are tailored around me, the patient. That's what I like to see from my VA.*

**Bob Feldman**, Marine Veteran





# RETIRED VISN 4 RESEARCHER RECEIVES MAJOR AWARD

Dr. Thomas Starzl, father of human transplantation, wins the 2012 Lasker Award

## Why it Matters:

As the father of human transplantation, Dr. Starzl's work has restored life to tens of thousands of people.

Dr. Thomas Starzl spoke at VA Pittsburgh Healthcare System's 2010 Research Week Kick-off.

Dr. Thomas E. Starzl, one of VISN 4's most distinguished retirees, was recently awarded the Lasker-DeBakey Clinical Medical Research Award for 2012 from the Albert and Mary Lasker Foundation. The Lasker Awards honor visionaries whose insight and perseverance have led to dramatic advances that will prevent diseases and prolong life. They are among the most respected science prizes in the world.

Starzl, a U.S. Navy Veteran and a VA surgeon and research scientist for nearly 50 years, is now director emeritus of the Thomas E. Starzl Transplantation Institute at the University of Pittsburgh. He was recognized for his work in the development of liver transplantation, which has restored life to thousands of patients with end-stage liver disease.

Often called "the father of human transplantation," Starzl began his VA career in Chicago in the 1950s. In 1962, while at the Denver VA, he conducted the first long-term successful kidney transplant.

In 1963, Starzl attempted the first human liver transplant. The patient died during the operation, but Starzl continued to improve the procedure. In 1967, he began transplanting livers again, treating patients with three drugs to restrain rejection.

In 1981, he joined the VA in Pittsburgh and the University of Pittsburgh School of Medicine and led the team of surgeons who performed Pittsburgh's first liver transplant. In 1989, Starzl introduced the anti-rejection medication FK-506, which markedly increased survival rates for liver and other organ transplants and led the way to other successful types of organ transplants.

Starzl is the seventh VA Lasker Award recipient. He received VA's Diamond Award in 2009 for his pioneering lifetime achievements in the field of transplantation medicine.







## PETER STRICK: NATIONALLY- RECOGNIZED SCIENTIST MAKES VA PROUD

In recognition of his scientific contributions and accomplishments, Dr. Peter L. Strick was elected to membership in the prestigious U.S. National Academy of Sciences (NAS) in May 2012. The NAS was established by President Abraham Lincoln in 1863 to provide independent advice to the government on matters related to science and technology. Election to the Academy is one of the highest honors that can be accorded a U.S. scientist or engineer.

Strick, a senior VA research career scientist, is director of the Systems Neuroscience Institute and co-director of the Center for the Neural Basis of Cognition, a joint program run by the University of Pittsburgh and Carnegie Mellon University. His research investigates the neural circuits responsible for the control of voluntary movement, cognition, and affect. He has developed the use of viruses with an affinity for neurons as a new technique for unraveling connections in the central nervous system. Strick is among the 84 new members and 21 foreign associates from 15 countries who were recognized last year by the NAS for "their distinguished and continuing achievements in original research."



# MILLION VETERAN PROGRAM:

Partnering with Veterans to Revolutionize Health Care

VA Pittsburgh Healthcare System (VAPHS) and Philadelphia VA Medical Center are among 51 facilities selected nationwide to serve as enrollment sites for the Million Veteran Program (MVP), a research program that will help scientists better understand how genes affect Veterans' health and illness. The ultimate goal of the program is to transform health care.

MVP is a national, voluntary research program conducted by the Department of Veterans Affairs Office of Research & Development. The program aims to enroll as many as one million Veterans over the next several years. Participants are asked to complete a one-time study visit, approximately 20 minutes in length, to provide a blood sample for genetic analysis. Participation also includes filling out health surveys, allowing secure access to participants' medical records by approved staff, and agreeing to be contacted in the future about participating in additional, voluntary research. This research program will establish one of the largest databases of genes and health history, and results of MVP may lead to new ways of preventing and treating common illness.

Dr. Elif Sonel oversees the program at VAPHS. She points out that most research gives medicine "a snapshot in time" to look at, but MVP's results will be studied for perhaps one or two hundred years.

By participating in MVP, Veterans contribute to a knowledge base that may result in developing personalized treatments for military-related illnesses, such as post-traumatic stress disorder, as well as more common illnesses like diabetes and heart disease. Results from MVP will help improve health care for Veterans and all Americans. MVP has extensive safeguards in place to keep Veterans' personal information secure and confidential. Participation will not affect Veterans' access to health care or benefits.

For more information or to participate, call **1-866-441-6075**.

You can also visit

[www.research.va.gov/mvp](http://www.research.va.gov/mvp)

or scan this QR Code with a smartphone app.



*It will leave a lifelong legacy for the people who participate in and conduct the study.*

**Dr. Elif Sonel,**  
Pittsburgh MVP  
Coordinator

Phlebotomist Tracey Bach helps VAPHS Deputy Director and Air Force Veteran David Cord donate a small amount of blood as part of his participation in MVP.



## A Spotlight on Research

# WHY RESEARCH MATTERS

Throughout VISN 4, VA researchers are discovering new knowledge, developing the next generation of talented investigators, and creating innovations that advance health care for Veterans and our Nation.

### Seven research centers keep VISN 4 on the cutting edge of health care.



#### **NEW CENTER FOR EVALUATION OF PATIENT ALIGNED CARE TEAMS (CEPACT):**

CEPACT, located in Pittsburgh, is one of five demonstration laboratories funded by VA to evaluate the Department's Patient Aligned Care Team model. The center supports existing evidence and provides new knowledge to help VA improve health care through changing the way in which primary care is delivered.

#### **1**

#### **CENTER FOR HEALTH EQUITY RESEARCH AND PROMOTION (CHERP):**

This center, with offices in both the Pittsburgh and Philadelphia VA hospitals, promotes equity and quality in health and health care among Veterans and others. Its PROMISE Center (Performance Reporting and Outcomes Measurement to Improve the Standard of care at End-of-life) was created to improve the care of Veterans and their families near the end of life. **Turn to page 10 to learn more.**

#### **2**

#### **CENTER OF EXCELLENCE IN SUBSTANCE ABUSE TREATMENT AND EDUCATION (CESATE):**

Philadelphia hosts one of VA's two CESATEs. CESATE reviews research from across the world to provide consultation to VA's Central Office on ways to improve the Department's substance abuse treatment programs. **Read more on page 12.**

#### **3**

#### **GERIATRIC RESEARCH EDUCATION AND CLINICAL CENTERS (GRECC):**

VA Pittsburgh's GRECC conducts basic laboratory research on the origins of aging and the diseases commonly associated with it, as well as research on how care is delivered to elders and the effects of rehabilitation. The GRECC also works with staff in VA medical centers to provide care to elderly Veterans and demonstrate new and improved ways for that care to be delivered. **Check out page 13 for more on GRECC.**

#### **4**

#### **HUMAN ENGINEERING RESEARCH LABORATORIES (HERL):**

Located in Pittsburgh, these unique laboratories work to continuously improve the mobility and function of people with disabilities through advanced engineering in clinical research and medical rehabilitation. **HERL is featured on page 14.**

#### **5**

#### **MENTAL ILLNESS RESEARCH AND CLINICAL CENTER (MIRECC):**

MIRECCs research the causes and treatments of mental disorders, and use education to put new knowledge into routine clinical practice in VA. VISN 4's two MIRECCs, located in Philadelphia and Pittsburgh, focus on comorbidity — the co-occurrence of mental health disorders with general medical, mental health, or substance use disorders. **Turn to page 16 to read more.**

#### **6**

#### **PARKINSON'S DISEASE RESEARCH, EDUCATION, AND CLINICAL CENTER (PADRECC):**

VA's six PADRECCs serve the estimated 80,000 Veterans affected by Parkinson's Disease and other movement disorders by providing state-of-the-art clinical care, education, research, and national outreach and advocacy. The Philadelphia PADRECC is composed of internationally-known neurologists, neurosurgeons, nurses, researchers, and educators who are experts on Parkinson's disease care. **Learn more about PADRECC on page 18.**



ATTERS.





# INCREASING QUALITY BY IMPROVING

CHERP ensures all Veterans receive the highest quality health care available anywhere

"We uphold providing the highest possible quality care to all Veterans, regardless of their racial or ethnic characteristics, gender, sexual orientation, age, or other potential vulnerabilities." That's how Dr. Michael Fine defined the work of the organization he directs, VA's Center for Health Equity Research and Promotion (CHERP).

CHERP researchers help VA health care professionals better understand the concept of equity as an essential dimension of health care quality. Their research improves the lives of Veterans by detecting differences in health and health care between vulnerable and non-vulnerable populations, such as African Americans or Latinos and whites. CHERP research investigates the multifaceted reasons for these disparities and ultimately works to develop interventions to reduce or eliminate them.

The center, jointly based in the Pittsburgh and Philadelphia VA Medical Centers, is principally supported by VA Health Services Research and Development (HSR&D). It also receives institutional support from VISN 4, the Philadelphia and Pittsburgh VAs, the University of Pittsburgh, and the University of Pennsylvania.

A number of CHERP researchers have received prestigious national awards in recognition of their research accomplishments. Among them are Dr. David A. Asch, who received the VA Under Secretary's Award for Outstanding Achievement in Research in 2008; Dr. Chester B. Good, who received the Under Secretary's Advancement of Pharmacy Programs Award in 2010; and Dr. Rachel M. Werner, who received the Presidential Early Career Award for Scientists and Engineers in 2009.

CHERP researchers recently completed a series of studies of racial differences in joint replacement surgery for patients with osteoarthritis. It's been well documented that fewer hip and knee replacements are done on African Americans than on non-Hispanic whites, despite the fact that the need is the same.

The research team found that African-American Veterans with chronic knee or hip pain were less likely than white Veterans to consider joint replacement as a treatment option and were more likely to expect worse outcomes following joint replacement surgery, such as pain, functional disability, and a longer hospital stay. Accordingly, the team developed information for VA health care professionals to better inform patients about the surgery and its expected outcomes and inform their decision-making about joint replacement.

CHERP investigators are also studying the safety, effectiveness, and value of medication use among Veterans. In a study published in the June 11, 2013, issue of the *Annals of Internal Medicine*, Dr. Walid Gellad, CHERP investigator, and colleagues compared the use of brand name drugs to generic drugs among 500,000 VA patients and one million Medicare beneficiaries.



Researchers found Medicare beneficiaries used two to three times as many brand name drugs as VA patients, at substantially higher cost.

Savings to VA were on the order of one billion dollars, based on VA's use of a single national formulary and cost-sharing for highly effective non-brand-name pharmaceuticals. Previous studies have shown the care VA provides to diabetics is just as good, if not better, than the care diabetic patients outside VA receive, demonstrating that cost savings did not come at the expense of diminished quality of care.

## Why it Matters:

Understanding the differences in VA health care experiences vulnerable populations undergo is the first step towards reducing or eliminating those differences.





# IMPROVING EQUITY



Studies currently underway include one focused on understanding the differences in VA health care experiences among minority and white Veterans, as well as male and female Veterans. Understanding the magnitude and nature of these differences is essential to develop targeted interventions to improve patient health care experiences among the growing proportions of minority and women Veterans who use the VA health care system. Another planned study will determine whether Veterans infected with HIV receive the same quality of cardiovascular care as non-infected Veterans.

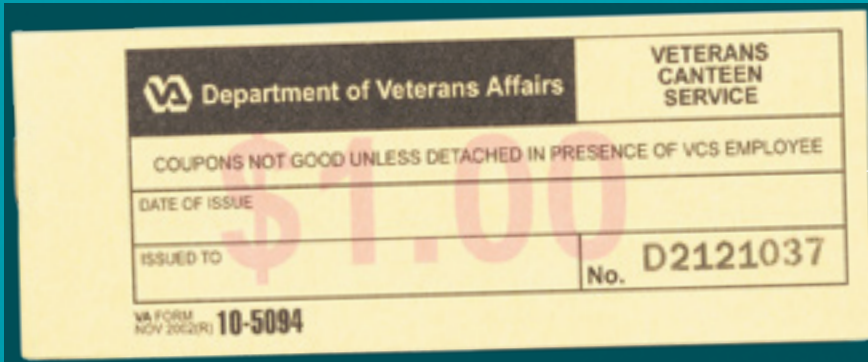
*“ We receive tremendous support for our daily operations and our infrastructure from VISN headquarters, and in particular from Network Director Mike Moreland. I’m grateful that the VISN values the work we do, and understands that our research helps ensure that we provide the highest quality health care for all of our Nation’s Veterans.*

**Dr. Michael Fine**, CHERP Director



# WIPING OUT SUBSTANCE ABUSE

VA's CESATE program helps clinicians treat Veterans with Substance Use Disorders



Substance Use Disorders (SUDs) such as alcohol or drug addiction have substantial negative consequences on Veterans' mental and physical health, work performance, housing status, and social functioning.

To help Veterans successfully overcome SUDs, the Philadelphia VA Medical Center is host to one of VA's two Centers of Excellence in Substance Abuse Treatment and Education (CESATE). "CESATE is not a research center," explains Dr. James McKay, the center's director. "It's a training and policy center."

The center provides consultation to VA's Central Office on ways to improve the Department's substance abuse treatment programs.

CESATE staff also works with VA SUD treatment programs by providing training, either at individual facilities or on a regional basis. CESATE follows up to ensure that new interventions facilities have learned are being done correctly.

Recently, CESATE staff has been working to implement an evidence-based intervention called Contingency Management. Approximately 85 VA facilities throughout the Nation, including

Philadelphia, Pittsburgh, Erie, Coatesville and Altoona in VISN 4, provide positive reinforcement in the form of vouchers for Canteen services when Veterans with cocaine addictions provide urine samples that indicate they have not used the drug recently.

To teach VA staff the principles of Contingency Management, CESATE accomplished four trainings throughout the Nation. Those were followed up with conference calls in which facilities report on how their implementation is going, and how Veterans are doing in the program.

"It's a very effective intervention," McKay says. "Eighty-five to ninety percent of the urine samples we've collected in the program have been cocaine-free. That's a very high percentage." VA programs that have implemented Contingency Management have now collected more than 11,800 urine samples as part of this initiative.

CESATE has also created, and is helping to implement, a standardized measurement tool for Veterans with SUDs. The tool allows clinicians to regularly monitor the progress of these patients, and to change their treatment plans if they are not progressing properly.



CESATE looks at research done throughout the world to glean findings of importance for VA and its clinicians.



## Why it Matters:

Veterans with alcohol or drug addictions are less healthy, have trouble getting and keeping jobs, and are often homeless. CESATE helps VA to provide treatments that change lives.



# GRECC MAKES GOLDEN YEARS GREATER

From TBI to driving, VISN 4's GRECC studies every aspect of aging

**//** *If what we learn in our research and clinical demonstration projects has benefit to older Veterans, we work with other VA facilities and GRECCs to implement changes in practice.*

**Dr. John Hennon**, GRECC Associate Director for Education and Evaluation

"About half of VA's patient population is over 65," explains Dr. John Hennon, associate director for education and evaluation at VISN 4's Geriatric Research Education and Clinical Center (GRECC). "That's a larger percentage than at other health care systems."

The staff of VISN 4's GRECC, led by Dr. Steven Graham, center director, conducts research on areas of importance to VA's large elderly patient population, including stroke, pain management, and rehabilitation. GRECC staff also trains clinicians to better care for elderly patients — many of whom eventually use those skills to care for Veterans.

VISN 4's GRECC, established in 1999, manages several patient care clinics, including the Geriatric Evaluation and Management Clinic, which comprehensively assesses the health of elderly patients. GRECC also administers the Geriatric Driving Safety Clinic, which measures driving abilities among the elderly, and the Teledementia Clinic, which allows patients to be seen remotely instead of having to drive to Pittsburgh.

In addition, the center accomplishes clinical demonstration projects, testing out new models of care to see if they are better, cheaper, or more effective than the methods VA currently uses. The driving clinic is one of those demonstration projects.

GRECC researchers primarily focus on stroke and on neurodegenerative disorders such as Alzheimer's disease and Parkinson's disease. The center is also doing research into Traumatic Brain Injuries (TBI). Although TBI is usually thought of in VA as an

injury affecting younger Veterans, Hennon points out that older Veterans are also susceptible.

"TBI really affects a lot of elderly. Older people fall down, and it's more common that they have head injuries than they break a bone," Hennon explains.

GRECC is an integral part of VISN 4's overall health care program. "We work closely with VISN 4 management on the Virtual Collaborative project," explains Hennon. "We help to train the 300 PACT teams throughout the VISN on issues related to the elderly. Our Teledementia project works with Community Based Outpatient Clinics in the western part of the VISN and with the Erie and Altoona VA Medical Centers."

## Why it Matters:

Half of VA's patient population is elderly. GRECC provides research and offers patient care that helps older Veterans live longer, healthier lives.







### Why it Matters:



Old-fashioned, bulky wheelchairs keep Veterans who use them for mobility from reaching their full potential. VA's state-of-the-art laboratories are pointing the way to the future.

# ON THE FRONTIERS OF MOBILITY

HERL provides Veterans with cutting-edge assistive technology

In 1980, Rory Cooper, a young U.S. Army soldier stationed in Germany, injured his spinal cord in a bicycle accident. During his recovery, he was given a bulky and heavy wheelchair to use, which greatly limited his mobility. Cooper immediately realized that wheelchair design could use a great deal of improvement and dedicated the rest of his life to making those improvements.

Within six months of his accident, Cooper enrolled in California Polytechnic State University to study electrical engineering. After achieving a master's degree, he transferred to the University of Santa Barbara, where he obtained his doctorate.

Cooper established a Human Engineering Laboratory at California State University in Sacramento, Calif., where he did extensive research in wheelchair design and use. In 1993, he joined the faculty of the School of Health and Rehabilitation Services at the University of Pittsburgh, with the mission of linking the University with its VA affiliate, VA Pittsburgh Healthcare System (VAPHS).

He moved his laboratory to VAPHS' Highland Drive Division, where it was named the Human Engineering Research Laboratories (HERL) in 1994. The laboratory began with one

VA merit review grant, one lab area, two graduate students, and one staff person besides Cooper and Dr. Michael Boninger, who was then, and is still, HERL's medical director.

Today, HERL conducts more than 74 active clinical studies in eight laboratories with machine shop space specifically built for them, with a staff of more than 50 people, including engineers, physicians, therapists, research specialists, and more than two dozen outstanding graduate students and medical interns studying rehabilitation.

"Our goal to improve the lives of people with disabilities includes not only research, but also research training, dissemination of information, and knowledge transfer," says Cooper. He is also a wheelchair athlete, having won a bronze medal at the 1988 Paralympics in Seoul, Korea, and more than 150 medals at the National Veterans Wheelchair Games.

Among the projects currently underway at HERL are the development of a transfer assessment instrument, which enables clinicians to quickly determine if their patients are transferring into and out of wheelchairs in accordance with the best practices available. The instrument is currently in its third stage of development, and is being successfully tested in clinics throughout the world.





The center is also attempting to reduce the number of wheelchair breakdowns, which are occurring at a large and increasing rate. They are creating training materials listing simple wheelchair maintenance steps that will be available online, and are creating more specialized online training courses for clinicians and others.

HERL is also working to develop an electric-powered wheelchair that will be fitted with robotic arms to help wheelchair users with limited hand function to propel themselves. The arms can also be used by remote control. Eventually, this wheelchair will also climb stairs and navigate difficult terrains such as ice and gravel.

For Veterans with traumatic brain injuries, HERL is developing the "Cueing Kitchen," a customized, fully-equipped kitchen fitted with sensing and cueing technologies to assist users with cognitive disabilities in performing everyday kitchen tasks. The kitchen responds to the user with built-in audio cues and displays via lighted cabinets and audio prompts. The system can be built within existing homes and in new construction, and customized to fit the individual needs of Veterans with various types of injuries.

Finally, the center is collaborating with the Walter Reed National Military Medical Center to disseminate the latest assistive technology medical and research information in a symposium series entitled "State of the Science." In addition, HERL has just received a \$100,000 grant from Highmark Blue Cross Blue Shield to support its Fabrication and Assistive Technology program, which teaches the basics of machining to Wounded Warriors.



HERL's mission is to continually improve the mobility and function of Veterans with disabilities through advancing engineering and clinical research in medical rehabilitation.



# PUSHING THE ENVELOPE ON ME

MIRECC improves understanding, treatment, and quality of care for Veterans with mental illnesses

“We know that when we are able to diagnose and treat (Veterans with mental health issues), people get better.” Those are the words of VA Secretary Eric K. Shinseki at the White House Mental Health Summit in June 2013. VA, the Secretary said, “will continue to improve access to mental health services and reduce the stigma of seeking help.”

VISN 4’s Mental Illness Research, Education, and Clinical Center (MIRECC) is dedicated to meeting the Secretary’s goal of improving the lives of Veterans with mental illness. This center, based in Philadelphia with a significant component in Pittsburgh, is directed by Dr. David Oslin.

“We’re working to advance our understanding of mental health treatments, both diagnoses and prognoses,” explains Oslin. “We’re very treatment oriented. We educate patients, their families, and VA staff about mental health issues to make sure patients and staff understand the latest treatments and information about the subject. We also provide some clinical care for Veterans.”

VISN 4’s MIRECC has chosen as its mission the treatment and prevention of comorbid medical, mental health, and substance use disorders. Comorbidity, which is the co-occurrence of mental health disorders with general medical problems or substance use disorders, is the rule, rather than the exception, for VA patients with mental health issues.

Since most Veterans with mental health issues suffer from more than one type of condition, their problems are more complex than those researchers typically study. The center believes that

research, education, and clinical practices that acknowledge the high frequency of comorbidity are more likely to be translated into standard practice throughout VA’s health care system.

“One of the things VA does well is getting patients to use our health care system for their mental health problems, because we provide a very robust menu of mental health services,” explains Oslin. “We’re helping Veterans with mental health issues to perform better in work environments and in social situations. We’re not only addressing the symptoms of mental illness, we’re also helping Veterans to function better in society.”

One project that has led to changes in the way mental illness is treated is a study whose authors have found that more than one-quarter of individuals with alcohol dependency problems have a genetic change that makes them particularly responsive to treatment with naltrexone, a prescription medication that helps patients with alcohol problems by keeping the body from wanting alcohol. Veterans with this genotype have a better than 75 percent chance of responding to naltrexone treatment. The MIRECC is conducting follow-up studies on this finding.



MIRECC researchers are participating in 67 federally-funded research projects, and have prepared 278 peer-reviewed research articles since 2011.



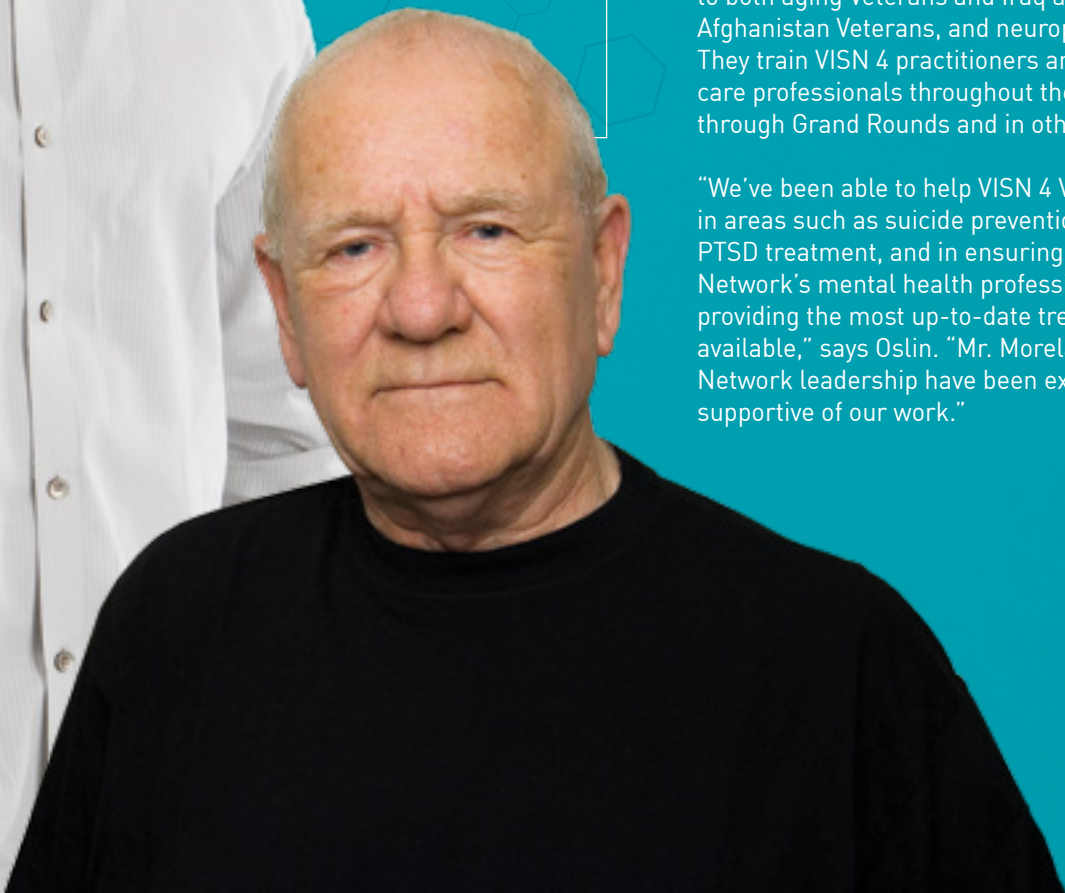


# MENTAL HEALTH TREATMENT

## TREATMENT WORKS



**Why it Matters:**  
VA Secretary Shinseki has committed the Department to improving care for Veterans needing mental health services. VISN 4's MIRECC is in the vanguard of this effort.



*I really think mental health is an area in which we need to keep pushing the envelope and developing better treatments.*

**Dr. David Oslin**, MIRECC Director

Other MIRECC investigators are studying ways to deliver quality mental health care to Veterans in primary care and other non-mental health settings. They have developed a model integrated care program and distributed it throughout VA. The model, called the Behavioral Health Laboratory, provides assessment, initial treatment planning, and decision support to VA primary care providers and patients. This program has been particularly valuable in reaching younger Veterans from Iraq and Afghanistan who have been reluctant to seek specialty care services.

In the past three years, the MIRECC has held conferences on topics of importance to mental health providers such as suicide, addictions, mental health issues related to both aging Veterans and Iraq and Afghanistan Veterans, and neuropsychiatry. They train VISN 4 practitioners and VA health care professionals throughout the Nation through Grand Rounds and in other forums.

"We've been able to help VISN 4 Veterans in areas such as suicide prevention, PTSD treatment, and in ensuring that the Network's mental health professionals are providing the most up-to-date treatments available," says Oslin. "Mr. Moreland and Network leadership have been extremely supportive of our work."

# PARKINSON'S DISEASE RESEARCH ON THE MOVE

Philadelphia VA's PADRECC helps Veterans with movement disorders to lead active lives

In 2001, VA created six specialized centers to treat Veterans with Parkinson's Disease (PD) and other movement disorders. Known as the Parkinson's Disease Research, Education, and Clinical Centers (PADRECCs), these centers serve approximately 80,000 Veterans affected by PD by providing them with state-of-the-art clinical care, education, research, and national outreach and advocacy.

One of the six PADRECCs is located within VISN 4, at Philadelphia VA Medical Center. Headed by Dr. John Duda, center director, the Philadelphia PADRECC provides Veterans who have PD with comprehensive clinical care and "one-stop shopping," offering a wide variety of services for Veterans and their caregivers in their clinic on the medical center's fourth floor.

Among the services the center offers are examinations for rehabilitation, psychiatric, cognitive, and speech and swallowing issues; examinations by specialized advance practice nurses and movement disorder neurologists; and consultations with social workers and pharmacists. In addition, consultations and examinations for specialized interventions such as Deep Brain Stimulation (DBS) and botulinum toxin treatments are available.

To improve access to the sub-specialty level care that the center provides, consultations are currently available by Telehealth services at several outpatient clinics throughout VISN 4, and the number of eligible sites continues to be expanded. An

additional Telehealth site has been established at VA's White River Junction, Vt., Medical Center. "Some patients, for whom travel to our center is prohibitive, no longer have to come to Philadelphia to get a consult," explains Duda.

The PADRECC also conducts educational fairs for patients and families on various PD topics; develops and distributes educational materials and handouts; and partners with community support groups and PD societies. For health care professionals, the center provides training opportunities to inform them of the latest advances in PD research and treatment.







The center also provides comprehensive diagnosis and treatment services for other movement disorders, including Huntington's Chorea, dystonia, tardive and dyskinesia.

"We're continuing to see more patients with Parkinson's disease who served in Vietnam, and more patients who have secondary parkinsonism (a movement disorder similar to Parkinson's disease but caused by certain medicines, or another illness) from medications like neuroleptics, which are used commonly to treat psychosis and depression," Duda explains. "Parkinson's symptoms are pretty common in patients who have used neuroleptics and we're finding ways to help them better manage their condition."

While research is an important part of the PADRECC's mission, most of what the staff does is take care of Veterans in routine clinical care. Veterans may be asked to participate in research studies, but such participation is strictly voluntary.

**“** *There are many Veterans and VA clinicians who still don't know about the PADRECC, even after 12 years. We're continually trying to expand awareness and get the word out that these services and resources, which we believe are comparable to the best Parkinson's disease clinics anywhere, are available to help more Veterans within VISN 4.*

**Dr. John Duda, PADRECC Director**

**Why it Matters:**

The PADRECC is one of only six centers throughout VA able to provide focused clinical care for Veterans with PD and movement disorders.



PADRECC Director Dr. John Duda works with Nurse Coordinator Heidi Watson.







**1. DR. MARY J. NIEBAUER (BUTLER)**

LEAD PSYCHOLOGIST AND PTSD TEAM LEADER

*"Research provides evidence that helps us offer Veterans the most effective treatment."*

**2. AMANDA CARPENTER (CLARKSBURG)**

PSYCHOLOGY TECHNICIAN

*"The exploration of knowledge, or research, is a key component of innovation. Research is essential to the advancement of knowledge, because it has the potential to provide answers to questions that may ultimately facilitate positive change."*

**3. JENNIFER MELEWSKI (ERIE)**

SYSTEMS REDESIGN COORDINATOR

*"Research is the foundation on which systems redesign is built. We are working to improve processes and revise the way we operate to provide better patient-centered care."*

**4. DR. RON PEKALA (COATESVILLE)**

COORDINATOR FOR RESEARCH & DEVELOPMENT

*"We have a chance to predict and control what happens to us, our family, our community, and our world. Without research, we wouldn't have treatments for high blood pressure or schizophrenia."*

**5. MARYBETH MITCHELL (LEBANON)**

PROJECT ACTIVATION SPECIALIST

*"VA research gives us the ability to make advances in health care that are specific to Veteran needs. Innovations in VA research ensure that Veterans will continue to receive the cutting-edge care that they deserve."*

**6. DR. STEVEN GRAHAM (PITTSBURGH)**

ASSOCIATE CHIEF OF STAFF FOR RESEARCH AND DEVELOPMENT

*"Research directed toward the special health concerns of Veterans leads to better health care for Veterans and helps attract the best and brightest health care providers."*

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## WE'D LIKE TO HEAR FROM YOU

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