Featuring an exclusive interview with Former Acting Under Secretary for Health, VHA, Dr. Richard Stone

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CAPITAL PUBLISHING

# Reflecting on Where VA's Veterans Health Administration Has Been in 75 Years and Where It's Heading

Statement by Dr. Richard Stone, Former Acting Under Secretary for Health, VHA

### VHA's early beginnings

At the end of World War II, 16 million American service members were coming home from the Second World War. Those men and women needed to be cared for in high quality academic medical centers around the country. The leadership in Congress and President Truman saw the need and passed the laws that allowed Veterans Affairs Administrator General Omar Bradley and Paul Hawley, MD, who led medical care for the war in Europe, to build the VA system we celebrate today.

Dr. Richard Stone

Those 16 million soon-to-be Veterans would need the support of the VA. Hawley and Bradley believed these Veterans deserved the highest quality health care possible. Over the next few years, they went about the process of building and adding 82 new hospitals that were co-located with the major academic medical centers and medical schools in the country by 1960. When reflecting on the extraordinary roles the Veterans Health Administration has played over the past 75 years, it is important to note that VHA educates about 70% of the physicians Nationwide, and trains approximately 120,000 residents and students in its institutions daily. More than 40 other health professions are currently represented by affiliations with over 1,800 unique colleges and universities.

In 1947, following World War II, VHA developed the first blind rehabilitation program in the world. The development of the CT scan followed in 1972. The first liver transplant, and the first pacemaker implantation occurred at VA hospitals. It was VHA's researchers who developed the nicotine patch in the 1980s and virtually eliminated Hepatitis C from the Veteran population, utilizing medications developed with the input of many VA researchers.

A little known fact, three Nobel prizes have been awarded over the last seven decades to VA researchers.

### Evolution of patient care

With each war, the needs are different. At the end of World War II there was this massive influx of 95,000 inpatient hospitalizations in the VA — this began a tremendous campaign that established VHA. Today, approximately 25,000 beds are in operation as the care of patients has evolved to become primarily outpatient.

The health needs of a World War II Veteran differs greatly from a Veteran who served in Vietnam and may have been exposed to Agent Orange, and both have different needs than a Afghanistan and Iraq war Veteran, who may have been exposed to improvised explosive devices and airborne hazards. The organization has shown agility, along with the ability to learn quickly, reconfigure rapidly, most recently seen while operating in the current COVID-19 pandemic.

### VA's Fourth Mission

One of the things celebrated at VHA is its Fourth Mission to be a backstop to the American health care system. During the early weeks of the COVID-19 pandemic, VA was able to reorganize to grow more than 2,500 hospital beds around the country. VA was positioned to increase to 4,000 as necessary pledging over 1,500 of those critical care beds to the care of non-Veterans whose communities were overwhelmed with sick patients. We are very proud of the Fourth Mission work we've done in 50 states and the District of Columbia to help non-Veterans.

As part of our Federal Emergency Management Agency and Department of Health and Human Services relationships, VA took on more than 140 missions nationwide from FEMA. Mission included providing infection control experts to facilities experiencing an outbreak, providing personnel on the Navajo or Hopi Indian Reservation as well as providing hospitalists, nurses and medics to provide support in moving forward.

VHA followed a model throughout the COVID-19 pandemic to try and save every life possible and take on the sickest patients in a community to free up resources. The VHA health care system has provided excellent care for critically ill patients. We are proud to have taken almost 500 seriously ill, non-Veteran patients and worked to save as many of them as we possibly could.

The last 14 months have been difficult for our Nation's healthcare system, VHA supports 369,425 employees, with 19,165 of those employees having been infected with the virus. We've lost 142 of our employees, however commitment and dedication to the mission remain. During the most recent storms across the south in Texas, Louisiana and Mississippi, VA employees volunteered to sleep in the hospitals to make sure there was care at the bedside of the person who needed them.

## VHA innovations

Another extraordinary example of dedication to mission is the creativity and innovation we've seen throughout the pandemic, to include the expansion of our 3D printing capability when the country was running short of critical supplies. More than 40 sites around the nation have 3D printing capabilities primarily for surgical planning. VA was able to repurpose its efforts to now print the department's entire supply of nasal swabs utilized for COVID testing. VA continues to support The U.S. Food and Drug Administration assisting in the development of positive airflow hoods and critical FDA projects. These capabilities developed as part of the COVID-19 pandemic have been an extraordinary testament to the innovation and creativity of VA employees.

## VHA health care during COVID-19

The need for agility has been essential during the COVID-19 pandemic, early in the pandemic, VHA stood up the Health Operations Center (HOC). Daily, all senior leaders across the VHA come together to review daily operations, discuss challenges and articulate where resources are needed most. This includes an in-depth review of civilian health care systems, a status of ICU beds and equipment and discussion of potential challenges ahead. Through use of the HOC, VHA is able to utilize best practices and propagate them across the country.

VA has led the country in vaccination efforts, vaccinating nearly 2 million Veterans at the time of this interview in February 2021. Updated VA vaccine numbers as of May 28,2021, include 2,951,639 total individuals have been fully vaccinated. For COVID19 Cases and Vaccination Numbers: https://www.accesstocare.va.gov/Healthcare/COVID19NationalSummary
COVID19 Vaccine Information Page: https://www.va.gov/health-care/covid-19-vaccine/

## Future of VHA

VHA will continue to be an exemplary high reliability organization serving our Nation's Veterans. The commitment and expertise of VA employees will continue to lead and advance research and treatment of diseases and injuries to Veterans. Where I see us going in the next 75 years is wherever the American Veteran needs us. We will begin updating or replacing many of our hospitals. What won't change or need replacing


Dr Richard Stone and nurses at a mass vaccination VA clinic in Aurora Colorado





Dr. Stone prepares to administer the vaccine

is the commitment of the VA employee and the expertise of the VA academic medical system that is really driving the advances in diseases and injuries to Veterans. Whether it's the newest prosthesis or the most advanced remotely operated hearing aids, or advances in disease processes like airborne hazards, VA will help lead most of that research. We are very proud of VA's large number of academic research programs, which have grown significantly since our inception 75 years ago. More than 7,000 VA research studies are currently ongoing. Close to $2 billion annually goes into research to advance the care of diseases and injuries that occur to service members who have lifetime implications, or that otherwise affect Veterans during their lives.

## Specialty care

VA is one of the largest providers of oncology services in the nation. More than 400,000 Veterans with cancer are currently receiving treatment with us. Our precision oncology program is working to offer Veterans in remote areas of the country the same benefits as somebody who lives near a University Medical Center. Through this program, we deliver precision medicine for Veterans with cancer anywhere in the country through tele-oncology. We continually strive to provide equitable care to all Veterans.

Studies have shown that care received within VA is exemplary and demonstrates the value of a highly integrated health care system, and it's one of the things we are extraordinarily proud of, as we 369,425 members of the department's VHA health care system come forward to provide care to America's Veterans.

## For more information

Veterans can learn more about VA assistance online via www.va.gov
or they can contact their local VA medical center and ask about enrollment eligibility or other programs.

*Editor's Note:* Writer Tom Adams sat down with Former Acting Under Secretary for Health, VHA, Richard Stone, MD and captured his thoughts on this moment in history. Dr. Stone oversaw the delivery of care to more than 9 million enrolled Veterans at over 1,200 health care facilities. He is a retired Army major general and Veteran of the war in Afghanistan.

Contributor to this story is Katie Delacenserie, historian for Veterans Health Administration.

Secretary Denis McDonough, left and Former Acting Under Secretary for Health, VHA, Dr. Richard Stone participate in a joint press conference.

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# BAMC Women's History Month Honors Women Past and Present

By Lori Newman, Brooke Army Medical Center Public Affairs

Brooke Army Medical Center, located aboard Joint Base San Antonio-Fort Sam Houston in Texas, held a virtual Women's History Month commemoration March 23 to honor women from the past and the present.

This year's theme, "Valiant Women of the Vote: Refusing to be Silenced," honored the brave women who fought to win suffrage rights for women, and the women who continue to fight for the voting rights of others.

Army Brig. Gen. Shan Bagby, BAMC commanding general, opened the event by highlighting the importance of women in the United States military.

"Women will always play a critical role within our military," the general said. "The strength of our military and our nation comes from its diversity. Developing and maintaining qualified and demographically diverse leadership is critical for mission effectiveness."

Today there are more than 230,000 women on active duty in the United States military, and 255,000 government civilians working within the Department of Defense.

The general talked about the significant roles women have taking within the military since the Revolutionary War. "We know from history and experience that the contributions and achievements of women make our military stronger," Bagby said. "Each day, there are countless examples of courageous and selfless service by military and civilian women throughout our ranks and within the halls of BAMC.

Brooke Army Medical Center Commanding General, Army Brig. Gen. Shan Bagby (left), and Army Command Sgt. Maj. Thurman Reynolds (right), present Lt. Col. Alison Murray, chief medical information officer, a certificate of appreciation for being the guest speaker during BAMC's Virtual Women's History Month Observation, March 23, 2021. *Photo by Robert Whetstone, Brooke Army Medical Center*

"I am overwhelmed by all of the women throughout history, or for the purposes of this conversation 'HER-story' who continue to serve as outstanding examples for us to follow," said the event's guest speaker Army Lt. Col. Alison Murray, BAMC chief medical information officer. Murray, has 18 years of military service, including five at BAMC; and currently serves as a nurse and information management officer.

Murray began by reflected on the women like Alice Paul, Lucretia Mott, Susan B. Anthony, Ida B. Wells, Anna Howard Shaw, Helen Keller and other suffragists who played significant roles in women obtaining the right to vote. "Please keep in mind that even though the purpose was to fight for the right to vote, there were other participants that were fighting for a whole lot more," she said, also mentioning the trailblazing efforts of 22 African-American women from Howard University who also participated in the 1913 Woman Suffrage Parade in Washington, D.C. as their first act of public service.

Murray encouraged everyone to think about how long it took to achieve voting right for everyone, which wasn't until the passing of the Voting Rights Act in 1965. "We have friends, family, staff members and patients old enough to remember when not everyone had a right that is essential to our standing as a functional democracy," Murray said. "Needless to say, we are better for the efforts of all of these brave women who refused to remain silent on our nation's path towards a more perfect union."

Murray also highlighted the female leaders at BAMC, including Air Force Col. Heather Yun, deputy commander for medical services; Army Lt. Col. Jody Brown, deputy commander for inpatient services, and several others.

"Clearly, the women of the Armed Forces and Brooke Army Medical Center are not staying silent," Murray said. "The late, great Shirley Chisholm once said 'if they don't give you a seat at the table, bring a folding chair.' The women of Brooke Army Medical Center, don't just bring chairs, they bring the entire table.

"We owe a debt of gratitude to all of those whom I have mentioned, in addition to the countless others that I did not," she concluded. "We are better for their leadership and for their voices." It is my hope that we inspire those currently in our ranks and those that are to come. We will not be silenced and most importantly, we remain steadfast in our commitment to demanding better for all people."

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*Active Duty*
SPECIAL FEATURES

# Navy Medicine Readiness Training Unit Everett Hospitalman Makes a Difference

By Douglas H. Stutz, NHB/NMRTC Bremerton Public Affairs Officer

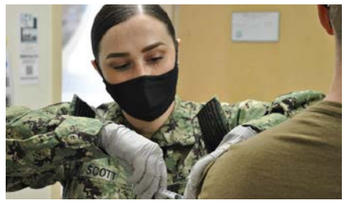
It didn't take long for Navy Hospitalman Paighton Scott to make a noticeable difference. Scott was recently selected amongst her peers as Navy Medical Readiness and Training Command (NMRTC) Bremerton's Blue Jacket of the Quarter.

The award is presented to enlisted personnel — such as Scott, assigned to NMRTC Bremerton's Navy Medicine Readiness Training Unit (NMRTU) Everett — who stand out from others in similar paygrades due to dedication to their responsibilities and professionalism. Scott was cited as an example of the Navy core values of honor, courage and commitment, along with the command's standards of care, competence and compassion.

"I was incredibly proud of myself, I felt as if all of my hard work had paid off, and I was just really excited to represent NMRTU Everett and make my command proud," said Scott, who has served as a Navy hospital corpsman for approximately 18 months.

"Receiving this award really makes me feel like I made the right decision with my career," said Scott, who primarily works as an immunization technician. "I have always loved medical, but finding out that I'm good at it and I am excelling in it is insanely reassuring and exciting."

Scott's Navy Medicine career actually began well before her active duty status, even before graduating from Clovis East. "A month after I turned 17, as a senior in high school, I went to the recruiting office and a week later I was sworn in," Scott said. "I have always wanted to work in the medical field, so choosing my rate wasn't hard at all."



Primarily handling duties as an immunization technician, Hospitalman Paighton Scott, a Clovis, Calif. native attached to Navy Medicine Readiness and Training Command Bremerton's Navy Medicine Readiness Training Unit Everett, was recently selected as Blue Jacket of the Quarter, due to dedication to her responsibilities and professionalism. *Official Navy photo courtesy of NMRTU Everett*

Her interest in a career with Navy Medicine was prompted by both financial considerations as well as the decision to enter a service branch with a good track record in supporting advancement goals of those seeking to further their aspirations.

"I couldn't afford college. Navy Medicine presented a lot of opportunities other than just college. I have acquired a tremendous amount of knowledge that I know will help me excel in a career in the medical field," Scott said. "It is an absolute honor to know that my hard work contributes to the mission and has so much meaning. Even when it feels like something small, it is vital."

Scott said she knew growing up that supporting those in need was a possible career choice. "I have always loved caring for people, especially children.I was a nanny before joining the Navy," Scott said. "I wasn't sure if I wanted to be a teacher or a medical professional until a very close family member was admitted into the ICU — intensive care unit — and kept inpatient for almost two weeks when I was 16. Watching how caring and attentive they were in saving her life kind of resolved any uncertainty that I had."

Already in her brief time, Scott readily affirms that Navy Medicine has provided a greater sense of responsibility for her.

"Knowing that people choose to come to me and count on me to help them or get a job done really makes me feel like I'm exactly where I'm meant to be," said Scott, and her workload at NMRTU Everett would seemingly confirm that.

Along with immunizations technician, Scott is a Family Medicine corpsman, a Periodic Health Assessment record reviewer, a Central Sterilization Room secondary technician, a Sexual Assault Prevention Response victim advocate and a Healthcare Effectiveness Data and Information Set secondary user. She also handles collateral duties as a member of the command's Diversity Committee, and serves as Junior Enlisted Association public affairs officer.

For much of 2020, Scott has also done her share and more to help stop the spread of COVID-19. "Working at the clinic Entry Control Point I screen patients for possible COVID-19 symptoms, coordinate with all clinic departments to ensure that patients do not overflow in waiting rooms and that patients are complying with mandated face covering and social distancing guidelines," Scott said. "This guarantees that all patients and staff members are kept safe and healthy within the premises."

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SPECIAL FEATURES

# Tidewater Set to Become Fifth Military Health System Market

By Jacob Moore, MHS Communications

The Defense Health Agency officially established the Tidewater Market in southeast Virginia on April 19. This is the fifth Military Health System market established to manage military medical treatment facilities as they transition to DHA.

Tidewater follows the National Capital Region, Central North Carolina, Jacksonville, and Coastal Mississippi markets, which were established in January 2020. It is the first transition since the COVID-19 national health emergency was declared.

A market is a group of MTFs in one geographic area working together with its TRICARE partners, Veterans Affairs hospitals, other federal health care organizations, private sector teaching hospitals and medical universities, as well as other health care partners. Markets operate as a system to support the sharing of patients, staff, budget, and other functions across facilities to improve readiness and the delivery and coordination of health services.

Although DOD decided early in the COVID-19 pandemic to pause transition, activities resumed in November, and a complete transition of management responsibilities for MTFs from the services to the DHA is scheduled to be completed by September 2021.


Navy Lt. Cmdr. Elaine Medley (right), assigned to Naval Medical Center Portsmouth, instructs Army Maj. Joanna Bailey and Army 1st Lt. Kristin Salcedo, both assigned to McDonald Army Health Center, in a simulated training on how to administer respiratory care in preparation to support the USNS Comfort's deployment in the fight against COVID-19. Naval Medical Center Portsmouth and McDonald Army Health Center will both be part of the DHA's Tidewater Market. *Photo by: Army Lt. Col. Brad Cunningham, McDonald Army Health Center*

Rear Admiral Darin Via Commander Naval Medical Forces Atlantic

"The establishment of this market provides a true opportunity to optimize health care for our beneficiaries by focusing on outcomes and access across the Tidewater market," said Navy Rear Adm. Darin Via, Tidewater market manager. "It also allows us to work towards standardization of processes, creating an easier environment for our patients to navigate within.

Via said the ability of patients to schedule appointments across multiple facilities, and the ability of MTFs to appoint personnel and refer patients in order to meet specific demands are among the many advantages of a market model. He also said standardization of processes, policy, and monitoring efforts ultimately results in improved quality and safety.

Via foresees a smooth transition focused on mission readiness."Transition will have no immediate impact on patient care and will be seamless to beneficiaries," he said. "This transformation builds on our successes on the battlefield with an eye on emerging global challenges to ensure we are ready to fight tonight."

The Tidewater market includes the following military medical treatment facilities:

### Navy

- Naval Medical Center Portsmouth
- Branch Health Clinic, Joint Expeditionary Base Little Creek (Boone Clinic)
- BHC, Dam Neck Annex
- BHC, Norfolk Naval Station (Sewells Point)
- BHC, Norfolk Naval Shipyard
- BHC, Chesapeake (Northwest Annex)
- BHC, Naval Air Station Oceana
- BHC, Yorktown (Naval Weapons Station)
- TRICARE Prime Clinic Virginia Beach
- TRICARE Prime Clinic Chesapeake
- TRICARE Prime Clinic Suffolk

### Army

- McDonald Army Health Center, Fort Eustis
- Troop Medical Clinic 1 (TMC1)
- Troop Medical Clinic 2 (TMC2)
- Fort Story Army Health Clinic
- Community-Based Medical Home Williamsburg

### Air Force

- USAF Hospital Langley Air Force Base (633 MDG)

"Establishment of the Tidewater market is a big step forward for the Military Health System, and for our patients," said Dr. Barclay Butler, DHA's assistant director for Management.

Butler reiterated that the pandemic has served to highlight the benefit of a market model, which ultimately results in higher quality care for MTF recipients.

"The market construct lets military medical treatment facilities coordinate locally to share patients, staff, and resources to improve care, patient access, and readiness activities," said Butler. "The global COVID-19 pandemic demonstrates the value of the market construct, giving our MTFs expanded flexibility and capability to adjust to local conditions in response to a crisis, while giving MHS patients a standard, high-quality experience across the whole enterprise."

The complete transition of MTFs to the DHA includes 19 direct reporting markets within the U.S., 18 small markets and many stand-alone MTFs across the country that will report to a Small Market and Stand Alone Organization, and two overseas Defense Health Regions.

The Military Health System remains committed to the congressionally-directed goal of transitioning all MTFs to DHA authority, direction, and control by Sept. 30, 2021.

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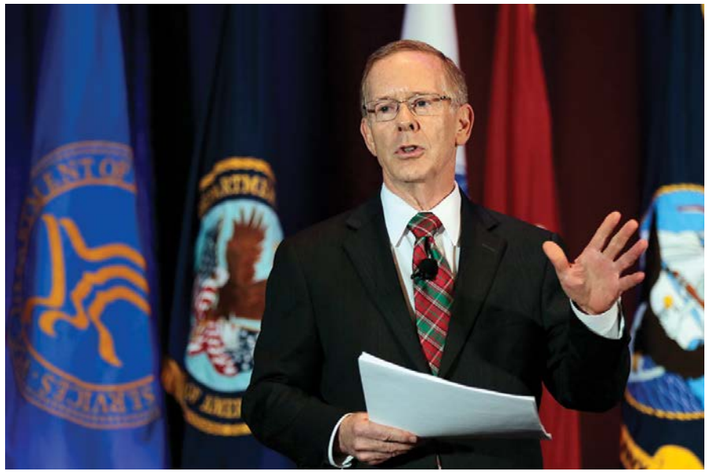
CPG



Dr. Barclay Butler DHA assistant director for Management

*Active Duty*
SPECIAL FEATURES

# Blood Donations Remain Vital for Service Member Care

By the Military Health System Communications Office

The Armed Services Blood Program is the military's only blood donor program for service members, their families, retirees, veterans, and local communities worldwide, helping those in critical need. Both whole blood and COVID-19 Convalescent Plasma from those who have recovered from COVID-19 remain in high demand. All 21 donor centers adhere to CDC guidelines to reduce the spread of COVID-19.

When it comes to the need for donated blood, soldiers on the battlefield understand. For Marines witnessing a member of their unit in danger of losing life or limb, it locks in quickly. They instinctively begin lining up to give because they see the human face behind the small needle sting and the hanging bag of blood.

Those in charge of military blood banks want stateside donors to see this face, too. Look no further than former Marine Cpl. Jason Hallett, who as a minesweeper serving in Afghanistan in 2010 lost both his legs above the knee, his right arm over the elbow, and fingers from his left hand, among other wounds.

Blood donation "is definitely one of those things that when you're actually needing it, it's front-of-mind," Hallett said from his home in Windsor, Colorado. "To get people motivated who do not see a right-away need for it, it's just a matter of getting into a right mindset."

Air Force Lt. Col. Valerie Sams, trauma medical director at Brooke Army Medical Center at Joint Base San Antonio in Texas agrees.

Jason Hallett underwent physical therapy at Walter Reed National Military Medical Center in Bethesda, Maryland after recovering from osseointegration, a complicated procedure where a prosthetic limb is surgically anchored and integrated into the patient's bone. *Photo Courtesy of WRNMMC*

"For military members, it's really easy downrange to see it, but it's kind of 'out of sight, out of mind' sometimes," Sams said. "I think people don't realize operations are still ongoing, even today. And we have brothers and sisters out there in harm's way that are getting injured. So, when you're back home in your local military treatment facility, it probably doesn't reach that level of criticality, but downrange, it does."

While there's a need for all blood types, the universal donor, O-negative, is always in particularly high demand.

Hallett explained that he has no idea of how much donated blood has coursed through his system over the years, but it's fair to say quite a bit. He was in three major military hospitals over four months after his trauma, and lost count of the number of surgeries and blood transfusions he underwent. Some of them were lost in memory due to medically induced comas. As if that weren't enough, his body often had bad reactions to the blood he received, such as iron deficiency or extreme fatigue, meaning that yet another transfusion was needed to stabilize him.

"Any surgery that I had, there had to be a follow-up transfusion," he recalled. Hallett has not needed blood in well over a year, since he underwent "osseointegration," a complicated procedure when a limb prosthesis is permanently, surgically anchored and integrated into the patient's own bones and flesh. He spoke of this all matter-of-factly, so when he talks of re-framing the issue of blood donation, his experience shows.

"For people stateside, I guarantee that there are people they know who have had to have a transfusion," he said. "It's just getting that story, and that background — that 'if this person that I'm close to didn't have a transfusion, they'd probably not be here right now, or they would have some significant issues.'"

Hallett likened the blood supply to car insurance.

"If you don't have it and all of a sudden you need it, it's like, 'Oh, crap,'" he said.

Hallett said he's amenable to helping with getting the message out about the critical need for blood donors, speaking from example. More blood drives that partner with wounded warrior organizations could help that.

"I don't think a lot of people are very open with stuff like that," he said. "I do think having people like me that are wanting to share that, it's kind of important. I think it would be very, very helpful."

Others in the military who have served overseas and who previously could not give blood might now be eligible, due to sweeping changes implemented by the ASBP last summer that will allow thousands more to donate. The changes were in response to updates in guidance from the Food and Drug Administration.

Former Marine Cpl. Jason Hallett cuddles with his twins, Jason Jr., and Marina. Hallett was severely injured when he stepped on an improvised explosive device in Sangin, Afghanistan on Oct. 23, 2010 Thanks in part to lifesaving measures, multiple surgeries and dozens of blood transfusions, he was able to become a father to the twins in October 2016. *Photo Courtesy of WRNMMC*

When asked if it was safe to say that if more people gave blood, it would directly save more lives on the battlefield, Sams did not hesitate.

"Absolutely," she said, adding that service members have died because of battle injuries followed by not enough blood on hand, or not enough available in the so-called "golden hour" after a grievous injury.

"In the forward environment at the point of injury, that has happened, and we know that's the number one cause of mortality in combat — those patients that were injured who needed both blood and surgical control of their bleeding, and they couldn't get it in time."

Blood drives and walking blood banks in forward areas are very successful, Sams said. But as Hallett alluded to, when the urgency is not present, often the donors aren't, either.

"When there are multiple injured soldiers, their units show up, and line up by the tens to hundreds to donate," she said. "It's a little bit trickier in garrison when people are just going about their normal lives. It's just not at the forefront of their mind. As we advertise these blood drives, we need to tie it back to that."

That means tying it to the trauma suffered by civilians on the home front, too. Giving blood so it can be delivered only to the front lines overseas is not really the point, Sams said. "But when we're doing these blood drives, it needs to be tied to the reason we do everything we do, and that's to save lives on the battlefield. That's the whole purpose of our existence."

Donated blood also benefits wounded warriors who are stateside, as many of them are in need of multiple surgeries over the course of months, or even years. And yet, even a proselytizer like Hallett realizes that the importance of blood donations can be easily forgotten. He was confronted with that understanding when, more than four years ago, his ex-wife gave birth to twins. Because she had to have a C-section, she needed a transfusion. After all the blood he had received over the years, it gave him pause.

"We have to remind folks. Most people who donate, donate multiple times," Sams said. "They donate every chance they get. Once folks make the connection, they will become a sustaining donor, but we have to help them make that connection sometimes. I think we should do a little better job of that when we're doing the blood drives."

Sams backs up her words with action, and says the kind of medicine she practices has influenced her desire to donate her own blood frequently. And a good thing, too. Her blood type is O-negative.

*tricare.mil*

*Active Duty*
ADDICTION

# MHS Looks to Decrease Substance Abuse, as Numbers Rose in 2020

By the Military Health System Communications Office

If there is one overriding element that Navy Lt. Cmdr. (Dr.) Eric Serpico would like you to know about National Drug & Alcohol Facts Week, it's that help is accessible, and care available.

"We will find you the correct level of care needed," said Serpico, department chief of addiction treatment services at Walter Reed National Military Medical Center (WRNMMC) in Bethesda, Maryland. "Anything we can do to break down stigma. We collaborate with command and the service member, and there is discretion and sensitivity in the process."

Treatment at WRNMMC includes detox capabilities, therapy and intensive outpatient services, and a psycho-education early intervention program. For longer inpatient needs, the hospital refers patients to facilities on other bases, such as those at nearby Fort Belvoir, or to civilian settings.

"Primarily in a military setting, we have seen alcohol as kind of the mainstay," Serpico said. "But that wouldn't preclude anyone who has used cocaine or marijuana from entering into treatment."

Regarding what's referred to as "illicit" drug use, the military's zero tolerance policy has been in place for decades, but the different branches handle addiction and substance use disorder (SUD) in different ways. And there are different means to get help — via command referral, medical referral, and self-referral. Overall, the approach to care is growing and evolving, Serpico explained.

"There's increased sensitivity, and I would say, support," he said. "We have seen junior enlisted to senior enlisted to officers all come through our program. They're actually being supported by their command to attend these treatments. I do believe there's been a shift in the culture to promote entry into our type of programs."

Even those to be punished with removal from the service might still be offered treatment, Serpico added, per the discretion of the commanding officer.

In the meantime, as with the population overall, COVID-19 is wreaking havoc on the armed forces, which historically have had a large subset of heavy drinkers, doctors interviewed for this story said. In a 2019 "Health of the [Department of Defense] Force" report on behavioral health, 13.3% of active service members screened positive on the Alcohol Use Disorders Identification Test-Consumption, which records only voluntary information from subjects, often post-deployment.

*Photo courtesy of the National Institutes of Health*

"It's very early in the process to see a pattern of how it's currently impacting — [or] when we come out of this pandemic, what likely might be the result," Serpico said. "We're in a unique time period, and it can become a challenge in finding healthy coping mechanisms to use, rather than substitutes like alcohol."

From a clinical standpoint, Serpico repeated what everyone from yoga teachers to late-night comedians have been saying since last spring: It's a challenge to be resilient in the face of a widespread pandemic and its accompanying fear and isolation. Reaching for a bottle of the hard stuff might be easy in the short term. But it's not going to help.

Substance abuse has some strong "co-morbidities," or accompanying maladies, that are always a threat, such as depression and anxiety. In times of COVID-19, a source of global stress, those dangers are exacerbated even more by drug or alcohol use, Serpico said. The impacts of isolation can be felt on all aspects of personal life: relationships, career, finances, physical health, you name it.

"You can accumulate risk factors in this pandemic," he said. "There is a susceptibility."

Some Alcohol and Drug Abuse Prevention and Treatment programs provide preventive avenues to active-duty members and National Guard and Reserve members on active-duty status who may be struggling with alcohol or substance abuse. *Photo by Air Force Senior Airman Curt Beach*

Patrick DeLeon, Serpico's deputy service chief at WRNMMC and a licensed clinical social worker, said there are about one-third more military members in treatment now than in pre-COVID-19 times.

"Many of our newer folks legitimately did not have an issue prior to March," he said. "This is something that has spiked for them, particularly in the March-April-May early time frame, when folks were very isolated, removed from work, and just out of their rhythms, and out of their social supports."

DeLeon stated that most of the new faces were a result of alcohol use by those forced to stay at home. And though unemployment is not an issue for active-duty service members, many had nonetheless found their identity and purpose diminished, and missed the camaraderie of normal work life. DeLeon called it, "the ripple effects of that missed human connection, that fellowship."

While alcohol saturates the culture, there is now widespread public acceptance for the legalization of marijuana, with many states already allowing recreational use of it. Though service members are still subject to the zero-tolerance policy for cannabis, retirees and dependents could more readily develop problems with the increased ease of access. Even seemingly innocuous new products could cause problems.

"That CBD ointment or hemp body wash you got in your stocking for Christmas was a kind gesture, but it can put your career at risk," read a note in the January 2021 edition of the Navy Drug Detection and Deterrence Newsletter. "Remember that [regulations] prohibit the use of hemp-derived products, including CBD, regardless of how it's used and regardless of claimed THC content. Protect your career."

Opioid use in the military remains a concern, too, said Dr. Joshua Gray, a clinical psychologist, researcher, and assistant professor at the Uniformed Services University in Bethesda, Maryland. Guidelines for short-term prescriptions of those highly addictive drugs have gotten stricter over time within the DOD, and though Gray said he feels the trend is in the right direction, for the many who have become addicted, it remains a challenge.

Still, alcohol is the main thread for SUD in the military.

"A large portion of the military is young men, which is the heaviest drinking group," he said. "It's definitely an ongoing issue. It's not a new one, but still significant with regard to health and career implications and readiness. Something we're focused on is, 'How do we better catch people earlier in the process of developing an alcohol use disorder?'"

This speaks again to the much-preferred scenario of self-referral rather than showing up for treatment as ordered, or as punishment. And Gray cited a study showing there are new efforts in the Army for more confidential settings for voluntary treatment, and other options.

Gray said aside from tobacco, alcohol is the most lethal drug in the military and in society overall, far and away more dangerous in terms of mortality than any other substance. Even deaths due to opioids, often described next to the word "epidemic," pale in comparison to the ubiquitous booze.

For more on substance abuse, addiction, getting help, and treatments, visit this Health.mil page or this TRICARE overview of SUD treatment. For help right now, visit the Veterans Crisis Line for text support or call 1-800-273-8255 (Press 1).

*va.gov*

**SUBLOCADE® (buprenorphine extended-release) injection, for subcutaneous use (CIII) is a prescription medicine used to treat adults with moderate to severe addiction (dependence) to opioid drugs (prescription or illegal) who have received an oral transmucosal (used under the tongue or inside the cheek) buprenorphine-containing medicine at a dose that controls withdrawal symptoms for at least 7 days. SUBLOCADE is part of a complete treatment plan that should include counseling.**

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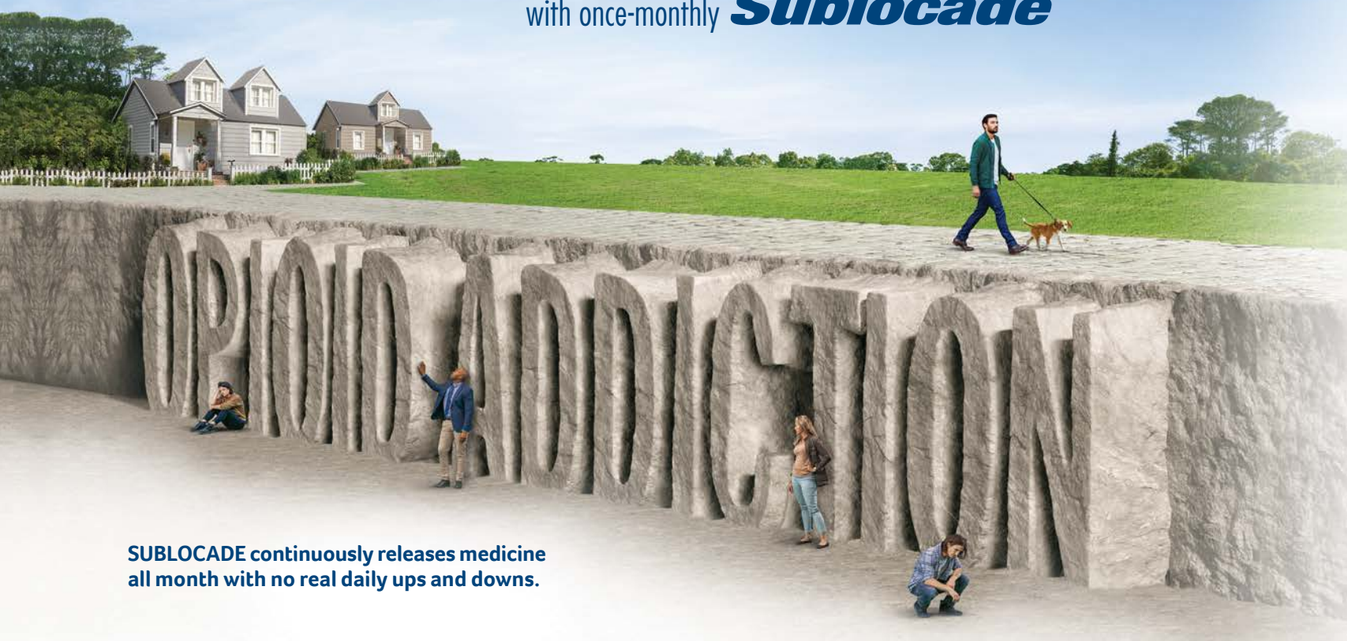


**SUBLOCADE continuously releases medicine all month with no real daily ups and downs.**

*Individuals depicted are for illustrative purposes only.*

## SUMMARY OF IMPORTANT SAFETY INFORMATION

**What is the most important information I should know about SUBLOCADE?**

**Because of the serious risk of potential harm or death from self-injecting SUBLOCADE into a vein (intravenously), it is only available through a restricted program called the SUBLOCADE REMS Program.**
- **SUBLOCADE is not available in retail pharmacies.**
- **Your SUBLOCADE injection will only be given to you by a certified healthcare provider.**

In an emergency, you or your family should tell the emergency medical staff that you are physically dependent on an opioid and are being treated with SUBLOCADE.

Buprenorphine, the medicine in SUBLOCADE, can cause serious and life-threatening problems, especially if you take or use certain other medicines or drugs. Call your healthcare provider right away or get emergency help if you:
- feel faint or dizzy
- have mental changes such as confusion
- have slower breathing than you normally have
- have severe sleepiness
- have blurred vision
- have problems with coordination
- have slurred speech
- cannot think well or clearly
- have a high body temperature
- have slowed reflexes
- feel agitated
- have stiff muscles
- have trouble walking

These can be signs of an overdose or other serious problems.

Death or serious harm can happen if you take anxiety medicines or benzodiazepines, sleeping pills, tranquilizers, muscle relaxants, or sedatives, antidepressants, or antihistamines, or drink alcohol during treatment with SUBLOCADE. Tell your healthcare provider if you are taking any of these medicines and if you drink alcohol.

SUBLOCADE is a controlled substance (CIII) because it contains buprenorphine that can be a target for people who abuse prescription medicines or street drugs.

Death has been reported in those who are not opioid dependent who received buprenorphine sublingually.

**Do not use SUBLOCADE** if you are allergic to buprenorphine or any ingredient in the prefilled syringe (ATRIGEL® Delivery System, a biodegradable 50:50 poly(DL-lactide-co-glycolide) polymer and a biocompatible solvent, *N*-methyl-2-pyrrolidone (NMP)).

**SUBLOCADE may not be right for you. Before starting SUBLOCADE, tell your healthcare provider about all of your medical conditions, including:**
- trouble breathing or lung problems
- an enlarged prostate gland (men)
- a head injury or brain problem
- problems urinating
- a curve in your spine that affects your breathing (scoliosis)
- liver problems
- gallbladder problems
- adrenal gland problems
- Addison's disease
- low thyroid hormone levels (hypothyroidism)
- a history of alcoholism
- mental problems such as hallucinations (seeing or hearing things that are not there).
- are pregnant or plan to become pregnant. If you receive SUBLOCADE while pregnant, your baby may have symptoms of opioid withdrawal at birth.
- are breastfeeding or plan to breastfeed. SUBLOCADE can pass into your breast milk and may harm your baby. Talk with your healthcare provider about the best way to feed your baby during treatment with SUBLOCADE. Watch your baby for increased drowsiness and breathing problems.

**Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins and herbal supplements.** SUBLOCADE may affect the way other medicines work and other medicines may affect how SUBLOCADE works. Some medicines may cause serious or life-threatening medical problems when taken with SUBLOCADE. Know the medicines you take. Keep a list of them to show your healthcare provider and pharmacist each time you get a new medicine.

The doses of certain medicines may need to be changed if used during treatment with SUBLOCADE. Do not take any medicine during treatment with SUBLOCADE until you have talked with your healthcare provider. Your healthcare provider will tell you if it is safe to take other medicines during treatment with SUBLOCADE.

You should not take anxiety medicines or benzodiazepines (such as Valium® or Xanax®), sleeping pills, tranquilizers, muscle relaxants, or sedatives (such as Ambien®), antidepressants, or antihistamines that are not prescribed to you during treatment with SUBLOCADE, as this can lead to slowed breathing, drowsiness, delayed reaction time, loss of consciousness or even death. If a healthcare provider is considering prescribing such a medicine for you, remind the healthcare provider that you are being treated with SUBLOCADE.

You may have detectable levels of SUBLOCADE in your body for a long period after stopping treatment with SUBLOCADE.

**What should I avoid while being treated with SUBLOCADE?**
- **Do not drive, operate heavy machinery, or perform any other dangerous activities until you know how this medicine affects you.** Buprenorphine can cause drowsiness and slow reaction times. This may happen more often in the first few days after your injection and when your dose is changed.
- **Do not drink alcohol** during treatment with SUBLOCADE, as this can lead to slowed breathing, drowsiness, slow reaction time, loss of consciousness or even death.

**What are the possible side effects of SUBLOCADE?**

**SUBLOCADE can cause serious side effects, including:**

**See "What is the most important information I need to know about SUBLOCADE?"**
- **Physical dependence and withdrawal.** Your body can develop a physical need for SUBLOCADE (dependence). If you stop receiving SUBLOCADE, you could have opioid withdrawal symptoms such as: shaking, goose bumps, muscle aches, sweating more than normal, feeling hot or cold more than normal, runny nose and watery eyes, or diarrhea or vomiting. These symptoms may start weeks to months after your last dose of SUBLOCADE.
- **Liver problems.** Call your healthcare provider right away if you notice any of these signs of liver problems: your skin or the white part of your eyes turns yellow (jaundice), urine turns dark, bowel movements (stools) turn light in color, decreased appetite, or stomach (abdomen) pain or nausea. Your healthcare provider may do tests before and during treatment with SUBLOCADE to check your liver.
- **Allergic reaction.** Call your healthcare provider or get emergency help right away if you get: rash, hives, itching, swelling of your face, wheezing or dizziness, or a decrease in consciousness.
- **Decrease in blood pressure.** You may feel dizzy when you get up from sitting or lying down.
- **The most common side effects of SUBLOCADE include:** constipation, headache, nausea, injection site itching, vomiting, increase in liver enzymes, tiredness, or injection site pain.
- Long-term (chronic) use of opioids, including SUBLOCADE, may cause fertility problems in males and females. Talk to your healthcare provider if this is a concern for you.

These are not all the possible side effects. Call your healthcare provider for medical advice about side effects.

**This is only a summary of important information about SUBLOCADE and does not replace talking to your healthcare provider about your condition and your treatment. Talk to your healthcare provider if you have questions about SUBLOCADE. Share this important information with members of your household.**

**To report pregnancy or side effects associated with taking SUBLOCADE, please call 1-877-782-6966. You are encouraged to report negative side effects of drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.**

**To learn more about SUBLOCADE, go to SUBLOCADE.com. For REMS information visit www.sublocadeREMS.com.**

**Visit sublocade.com and ask your healthcare provider if SUBLOCADE is right for you.**

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*Active Duty*
ADDICTION

# Garrison Provides Support Services to Help with Pandemic Substance Use

By Keith Pannell and Julia Hanessian, USAG Rheinland-Pfalz Army Substance Abuse Program

The difficult process of finding a new normal during COVID-19 has been a challenge for many, especially those who struggle with substance use.

A recent report on substance use notes that more than "20 million people in the United States suffer from a substance use disorder." Before the pandemic started, drug testing positivity rates among U.S. workers had reached a 16-year high. Since the beginning of the pandemic several states have reported an increase in opioid overdoses, according to recent reports.

In contrast, the active duty military community has not seen a rise in opioid overdose related deaths or opioid use. In fact, because of more options for pain management and more stringent prescription rules, opioid related deaths have been decreasing for the past two years, according to local military officials.

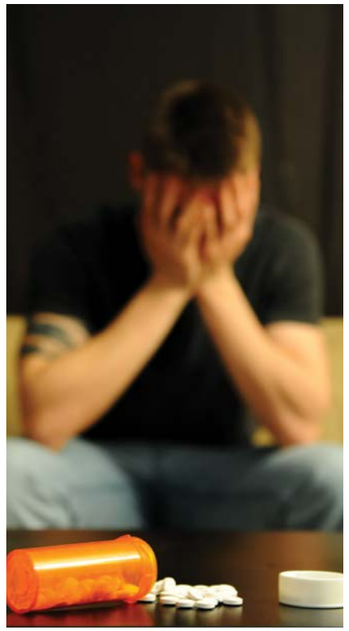
Although the military community isn't experiencing the same crisis with opioids seen in the states right now, there are other drugs that some are turning to, including marijuana and "juice," a synthetic drug used with a vape.

This trend among Soldiers and family members is echoed in open source data since the beginning of the pandemic. During a recent review of more than 1 million comments and threads on Reddit.com from January 2020 to July 2020 to determine drug use trends and patterns since the beginning of COVID 19, it was found that the top three most-used substances are marijuana, alcohol, and hallucinogens.

It further uncovered that drug use jumped from March-May, coinciding with the height of the lockdown during the first wave. The review also found that drug use went down a little in June, but rose again in July.

It was also noted that many more people tried to stop using drugs in July, perhaps as a reaction to overuse. However, substance use was also very high in the month of July.

The greater Rheinland-Pfalz community has several resources available for those who are struggling to manage their substance use. The Army Substance Abuse Program (ASAP) has a number of support programs in place for community members, including education and counseling resources, to include monthly 'Prime for Life' classes which equip people with tools to help them make low risk choices regarding alcohol and substance use.



U.S. Air Force photo by Airman 1st Class Victoria H. Taylor

Beyond education classes, ASAP has Employee Assistance Program Coordinators (EAPC) to provide confidential, short term, solution-focused counseling for all Army civilians and retirees, and their family members over 18.

EAP counseling often serves as the first step for getting tools that can help people follow through with changes they want to make with a focus on the 'now'; solutions and results. The Air Force also has an EAPC program for Air Force civilian service members and their families.

Another option available to Army and Air Force members and their families are Marriage Family Life Counselors (MFLCs) to turn to as a first line of support with substance use struggles. They also provide confidential, short term, solution-focused counselling, and referral services if more support is needed.

In addition, military community members also have Chaplains to turn to for non-clinical, spiritual support when wrestling with substance use.

*army.mil*



*Active Duty*
AUDIOLOGY

# Strategies for Hearing Loss Prevention Help Service Members Stay Ready

By DoD Hearing Center of Excellence, Public Affairs Office

"Hearing loss is a complex condition and has a variety of causes — exposure to hazardous noise, genetic conditions, or complication of other diseases such as measles and mumps," said Dr. Theresa Schulz, prevention division chief for the Department of Defense Hearing Center of Excellence, a division within the Defense Health Agency's Research and Development Directorate.

Noise-induced hearing loss from hazardous noise is the most common cause of hearing injury for veterans, as reported in the annual Department of Veterans Affairs' Veterans Benefits Administration compensation report. In 2019, there were 2.17 million disability compensation recipients for tinnitus (ringing, buzzing and other sounds in the ears or head) and 1.3 million compensation recipients for hearing loss. However, overall hearing health for active-duty service members is steadily improving, according to a recently released DOD report, "Hearing Health Surveillance Data Review, Military Hearing Conservation — Calendar Year 2019," which shows hearing impaired service members fell from 18% in 2013 to 14% in 2019.

Schulz explained that the current decrease in hearing loss is the result of several ongoing DOD initiatives, along with substantial hearing conservation programs managed by each service component.

"Several initiatives have been underway for a number of years to combat hearing loss and improve hearing health care for service members and veterans," said Schulz."

One of these initiatives is a joint service and center project to develop a Hearing Protection Device Evaluated Products List of protective devices that are tested using the latest standards set by the American National Standards Institute. The list was developed to help solve the dual but competing needs of delivering hearing protection while also maintaining a service member's situational awareness.

"This resource can help service members and their supervisors select products that meet their hearing protection and operational needs," Schulz explained.

According to Schulz, the use of individual fit-check systems is also being advanced as a more precise way to verify the level of protection a device is giving to an individual, and ensure service members properly wear and use their issued hearing protection. "Proper fit is especially important as weapon systems become increasingly more powerful and hazardous," added Schulz.

Another initiative combatting hearing loss is the Comprehensive Hearing Health Program (CHHP), which involves three major components to reduce hearing loss: educate, protect, and monitor. The center and the services are deploying the multi-faceted program across the DOD to increase awareness about hearing loss prevention strategies and to influence healthy hearing behaviors in service members and their families, according to Schulz. Local implementation at audiology clinics includes providers' use of CHHP information materials to deliver standardized hearing health education, and hearing protection fittings during clinical and hearing conservation patient visits.

In 2019, the center received funding under the Joint Incentive Fund (JIF) to develop a DOD and Department of Veterans Affairs Hearing Technician Training and Certification Program, as a pilot effort to implement a hybrid/virtual training platform with the goal to standardize and ensure best practice care delivery across the continuum of service member to veteran status.

The program also ensures hearing technicians are trained to the nationally recognized standard of the Council for Accreditation in Occupational Hearing Conservation (CAOHC). According to Schulz, the CAOHC recently approved the program, enabling it to continue as a model to train more than 5,000 hearing technicians across the DOD and VA. To date, 184 hearing health technicians have obtained training and certification through the pilot program.

"With more hearing technicians certified virtually, I believe this has created extra time for DOD and VA audiologists to focus on more complex audiology cases, which in turn is increasing access to care," said Schulz.

*health.mil*

*Active Duty*
AUDIOLOGY

# Navy Audiology Increases Medical Readiness and Hearing Awareness

By Douglas H. Stutz, NHB/NMRTC Bremerton Public Affairs Officer

With hearing loss one of the most common disabilities among sailors, Navy audiologists such as Lt. Shanece Washington, provide an impact on their patient's quality of life and quality of hearing. Give a listen; hearing conservation is at the heart of recognizing October as National Audiology Awareness Month.

Washington, a Navy Medical Service Corps officer and Occupational Audiologist, is also the Regional Hearing Conservation program manager at Navy Medicine Readiness and Training Command (NMRTC) in Bremerton, Washington.

Washington grew up in a military family, and always knew from a young age that she wanted to work with military members or veterans. "My father served in the Air Force as a captain and instilled a sense of responsibility and service to community in his children," said Washington.

That fatherly advice has also empowered Washington to take on a host of overlapping duties, which include Hearing Conservation Program Manager, COVID-19 Level 1 Triage provider, Occupational Audiology department head, Controlled Substance Inventory board chair, Medical Service Corps secretary, Navy Sexual Assault Prevention Response program-victim advocate, Voting Assistance Officer, Diversity Officer, and Command Managed Equal Opportunity (CMEO) Program Manager.

"All of my assignments have been exciting and challenging in a variety of ways," Washington said. Washington's duty as audiologist directly contribute to the Navy surgeon general priority on operational readiness and Navy Medicine's core mission of producing force medical readiness and medical force readiness.

"The mission of Navy Audiology is to prevent occupational-related hearing injuries and increase medical readiness. Hearing loss can place members in danger, diminish oral and communication skills, and lead to ineffective command control with a potential for mission failure," said Washington. "Hearing directly impacts the ability/inability to localize and identify sound sources in an environment. The vision of Navy Audiology is to ensure mission readiness in worldwide operations by optimizing warfighter lethality, survivability and situational awareness. We accomplish this through advocacy, outreach, training, hearing protection, medical surveillance, and treatment/rehabilitative services."

As the nation — and armed services — come to grips with confronting not just the current pandemic outbreak, but also racial injustice, Washington's role as CMEO program manager is crucial in providing all staff members — active duty and civil service — a safe and secure setting to perform to their maximum ability.

"The CMEO program is in place to ensure an environment that is free from social, personal, and institutional barriers that would prevent service members from rising to the highest level of responsibility possible. The ultimate goal is to foster and promote an environment that prevents harassment and unlawful discrimination. There are six protected categories for which harassment and discrimination are prohibited: race, color, gender (including gender identity), sexual orientation, national origin, and religion," noted Washington.

Washington attests that the importance of the CMEO program cannot be understated. "Discrimination and harassment undermine the capability of a functioning team and are a disservice to the staff members and beneficiaries we serve at this command. The CMEO program is essential to promoting a positive command climate and fostering an environment where all Service Members can thrive," Washington said.

Navy Lt. Shanece Washington, Navy audiologist, advocates for hearing conservation and education during Audiology Awareness Month. *Photo by Douglas H Stutz, NHB/NMRTC Bremerton*

"I hope to promote a climate that goes beyond the idea of equality, but rather highlights the need of equity and equitable practices that must be built into everyday occurrences across the command to ensure equality," added Washington.

"Ultimately, I hope to grow NMRTC Bremerton into an example of best practices for the Department of the Navy's Equal Opportunity and Sexual Harassment programs."

When asked to sum up her Navy Medicine career in one sentence, Washington replied, "My Navy career has been the most challenging and rewarding thing I have ever done, and has propelled me to higher levels of responsibility that I previously had not considered."

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CPG

*Active Duty*
CARDIOLOGY

# COVID-19 Presents Challenges to Heart Health, Physical Fitness

By Military Health System Communications Office

A healthy heart is a prerequisite for a fully trained combatant or a fit beneficiary. Without a healthy heart, a soldier cannot expect to complete tasks such as loading 155 mm rounds onto a bustle rack, or a beneficiary may huff and puff going up stairs.

"A heart at rest stays at rest, while a heart in motion stays in motion, to paraphrase the old axiom," said Navy Lt. Cmdr. (Dr.) Olamide Oladipo, chief of cardiology at the Navy Medical Center-San Diego (NMC-SD).

Due to on-again, off-againshutdowns resulting from the COVID-19 pandemic, the overall health of both military personnel and beneficiaries has taken a hit over the last year, he noted. A more sedentary lifestyle increases the risk of cardiovascular disease and, therefore, death.

One way the military is addressing this issue is through the Aging Warrior study, which intends to look at cardiovascular risks in men 40 and older and women 52–55 with one risk factor for cardiac disease, such as hypertension, Oladipo explained. Following a CT scan, study participants will receive preventative medication or other interventions if they show early signs of cardiac atherosclerosis (a narrowing or blockage of the heart vessels).

As to fitness, NMC-SD has "adopted more of a holistic approach; we treat the whole person" among active-duty personnel and beneficiaries, said Melissa Palacios, a nurse and head of the Health and Wellness Department at NMC-SD's Naval Medical Readiness Training Command. "We're looking at concomitant diagnoses that affect a person's heart health," such as diabetes, sleep apnea, obesity, stress, PTSD.

"We do this though more virtual classes, group-based exercise programming, fitness trackers and apps that help with heart rate monitoring, food intake, medication, and sleep hygiene, for example," she said, also noting the negative impact COVID-19 has had on the base's effectiveness in physical training and meeting beneficiaries' fitness needs.

"Getting moving can have a profound impact on lowering blood pressure, strengthening muscles, controlling weight, lowering stress, and reducing inflammation, therefore decreasing risk for heart disease," Palacios said. "We encourage our active-duty members and beneficiaries to not only participate in aerobic activities such a swimming, dancing, cycling, brisk walking or cycling but also in identifying opportunities in their everyday lives to intentionally become more physically active such as taking the stairs."

The ideas behind fitness training also have changed in the Army. At Ft. Leonard Wood in Missouri, unit physical training "used to be very focused on the Army Physical Fitness Test events (push-ups, sit-ups, and running)," said Army Maj. Brett Dougherty, director, Physical Performance Service Line, General Leonard Wood Army Community Hospital. "However, over the last few years, that focus has slowly changed to incorporate more resistance training, specifically functional lifting, and that change accelerated with the introduction of the Army Combat Fitness Test that looks at the body more functionally."

U.S. Coast Guard recruits from company Romeo-199 participate in a Jan. 8 run program on the track at U.S. Coast Guard Training Center in Cape May, New Jersey, as part of their modified training schedule due to COVID-19 restrictions. *Photo by Navy Seaman Josalyn Brown*

Functional lifting are exercises that help troops perform everyday activities more easily, such as changing heavy tires.

The Army follows the October 2020 FM 7-22 guidance on fitness and physical performance, which includes five domains of combat physical fitness: muscular strength, muscular endurance, aerobic endurance, explosive power, and anaerobic endurance. The guidance lays out exercises, stretches, progressions, and sample schedules of how to train for Army fitness tests and overall fitness. It includes aerobic exercise, strength and resistance training, agility, flexibility, and balance.

FM 7-22 also gives guidance on nutrition, sleep hygiene, mental wellness, and the overall well-being of soldiers, all factors integral to overall heart health.

Physical fitness is therefore much more than laps run, push-ups done, crunches crunched. It's a holistic framework of both physical and mental fitness that means being able to exercise while avoiding injury and enjoying a longer life span. And, when it comes to physical fitness, a healthy heart is paramount.

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*Active Duty*
CARDIOLOGY

# Cardiovascular Providers Counter Pandemic-induced Sedentary Lifestyle

By Military Health System Communications Office

The fear of encountering COVID-19 at civilian hospitals and emergency rooms is likely keeping patients away even if they are having a cardiac event, according to Air Force Col. (Dr.) Bryan White, a cardiovascular specialist at the Mike O'Callaghan Military Medical Center located aboard Nellis Air Force Base, Nevada.

"The ERs have been overwhelmed. If you have a cardiac disorder, it can be scary to think of going to where there are COVID-19 patients and long waits in crowded conditions," White said.

As a result, many elderly patients are presenting much later in the course of their disease, with more advanced and possibly irreversible symptoms and disease, White added.

Due to the pandemic, many heart patients are also self-isolating. This leads to a more sedentary lifestyle because they are afraid to go to stores, which then leads to more unhealthy diet and exercise habits. They are also becoming depressed and/or anxious, or developing or worsening hypertension, all of which are contributing factors to heart health decline.

"The risk factors were there pre-COVID-19, but have increased," White said. "Even though patients are doing a good job at avoiding COVID-19, the increased stress, anxiety, and isolation are taking their toll."

In contrast, Nellis beneficiaries "are happy to come in" he said, "because elderly patients want the care" and know that they can make a one-stop shop by also getting their prescriptions on base as well as getting diagnostic procedures and lab work done, thus lessening the need to drive to multiple stores or centers that could increase their exposure to COVID-19.

To mitigate exposure, the 99th Medical Group that operates the Nellis military medical treatment facility has staggered appointments, and follows strict Centers for Disease Control and Prevention COVID-19 protocols.

Michelle Pribble, Naval Medical Center San Diego's (NMCSD) lead nuclear medicine technologist, administers an IV to a patient before a positron emission tomography (PET) scan in the hospital's Nuclear Medicine Department in October 2020. A PET scan is used for revealing or evaluating conditions like heart conditions, cancers, and brain disorders *Photo by Navy Seaman Luke Cunningham, Naval Medical Center San Diego*

Nellis patients can come in person or use telehealth. White sees patients face-to-face, while other cardiac specialists see patients virtually. Nellis is also looking to acquire more COVID-19 vaccines, especially for the retiree and beneficiary populations, he said.

"I agree that patients with cardiac conditions are avoiding the hospitals and ER due to fear of COVID-19 exposure," said Navy Lt. Cmdr. (Dr.) Olamide Oladipo, chief of cardiology, Navy Medical Center-San Diego. "I cannot speak to whether the isolation, depression, anxiety and sedentary lifestyles are making more cardiovascular patients sicker" due to lack of data.

"I can say that cardiovascular patients at NMCSD are followed regularly using virtual tele-visits, and patients who need visits at the facility for any reason are given in-person appointments," Oladipo said.

To ensure everyone's safety and reduce potential COVID-19 exposures at NMCSD, patients and staff members are screened before getting to the clinic on a regular basis with temperature checks and by answering simple screening questions for COVID-19-related symptoms.

"We also developed a staggered appointment process to space out in-person encounters and prevent multiple patients at one time in the waiting area," Oladipo said.

Whatever the perception, it is highly likely that COVID-19 is having a negative impact on cardiovascular care across the nation. But what makes care distinctive for Military Health System service members, retirees, and beneficiaries is that military medical treatment facilities are a known and safe entity they can count on.

"It's the community aspect to military care that makes it special," White said.

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*Active Duty*
DERMATOLOGY

# Artificial Intelligence Makes its Way to MacDill Dermatology Clinic

By Senior Airman Adam R. Shanks, 6th Air Refueling Wing Public Affairs

The dermatology clinic at MacDill Air Force Base boasts a machine that can help patients log and track various skin conditions over time.

The software's ability to use high resolution photos of the patients' body and intelligently detect when new marks appear and grow larger allows Maj. Thomas Beachkofsky, the 6th Health Care Operations Squadron dermatologist, easily to monitor areas of concern with his patients.

However, a new software upgrade that takes advantage of machine learning has opened up new opportunities to use this machine, which is one of two in the Air Force.

"Our new software that works with our body scanner uses artificial intelligence and machine learning to analyze a lesion or mark on the skin and uses an algorithm to rate the likelihood that the spot is harmful," said Beachkofsky. "With training, our dermatology technicians can use this program to efficiently scan and process questionable spots."

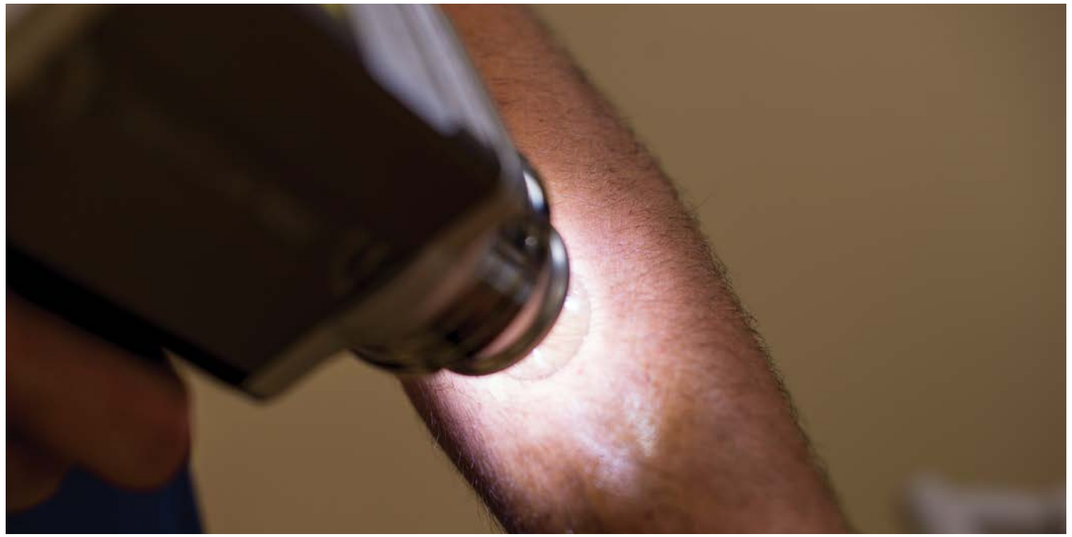
Beachkofsky explained that although the machine makes an educated guess on the severity of the lesion, it is up to a fully-trained dermatologist to make a diagnosis and recommend treatment.

Lt. Col. Kurtis Kobes, the 6th Operational Medical Readiness Squadron dental flight commander, was among the first to benefit from the new software, after seeking a second glance at MacDill's clinic for a spot on his forearm.

"Based on how it looked, and the results from the scan, I ordered a biopsy which came back as melanoma in situ," remarked Beachkofsky.

A dermatology body scanner displays an image of a test skin lesion at MacDill Air Force Base, Florida. A new software upgrade allows a complex algorithm to scan an image captured with the camera and rate the severity of the spot for a dermatologist to review. *U.S. Air Force photo by Senior Airman Adam R. Shanks*





Maj. Thomas Beachkofsky, 6th Health Care Operations Squadron dermatologist, demonstrates how a body scanner microscope works at MacDill Air Force Base, Florida. A new software upgrade allows a complex algorithm to scan an image captured with the camera and rate the severity of the spot for a dermatologist to review. *U.S. Air Force photo by Senior Airman Adam R. Shanks*

Melanoma in situ, also called stage zero melanoma, is a very early stage of cancer where the cancerous cells only affect the epidermis and have not spread to deeper layers of the skin.

"It's very fortunate that something like this was caught in as early of a stage as it did," remarked Beachkofsky. "Melanoma can be deadly if left to spread, so treating it while it's in situ allows a simple procedure with a fast recovery."

U.S. Air Force Maj. Thomas Beachkofsky, 6th Health Care Operations Squadron dermatologist, and Staff Sgt. Dalton Mace, 6th HCOS aerospace medical technician, prepare Lt. Col. Kurtis Kobes, a patient, for a procedure at MacDill Air Force Base, Florida. With the help of a new dermatological analyzing software, Beachkofsky was able to diagnose a spot as an early stage of melanoma on Kobes and remove the area of skin before it could develop into deeper layers of skin. *U.S. Air Force photo by Senior Airman Adam R. Shanks*

With the new software upgrade, the dermatology office hopes to give its patients the peace of mind that their questionable spots can be checked accurately and efficiently.

"I'm very grateful for the dermatology clinic quickly verifying and handling the suspicious area on my forearm," said Kobes. "I've had this spot for over a year, and after having it looked at by other clinics, I was only told it could be monitored, but it didn't look alarming."

In a study named "Man against machine," the deep-learning algorithm used by the analyzing software was able to correctly identify 95% of malignant skin tumors. This data was compared to 58 dermatologists across 17 nations, who were able to successfully identify 86.6% of the same tumors.

"It's definitely not a replacement for doctors, nor is AI taking over health care," laughed Beachkofsky. "It's mostly a tool for a dermatologist to get a second opinion from a system that has analyzed tens of thousands of lesions and is constantly learning."

*airforcemedicine.af.mil*

CPG

*Active Duty*
EMERGENCY

# 62 AW Airlifts COVID-19 Patient to Texas

By Senior Airman Mikayla Heineck, 62nd Airlift Wing Public Affairs

The 62nd Airlift Wing's quick action enabled a COVID-19 patient to be airlifted from JBLM to San Antonio Military Medical Center, Texas, March 31.

The individual was a patient at Madigan Army Medical Center here. The individual was in severe respiratory distress and had undergone surgery earlier to be hooked up to an extracorporeal membrane oxygenation (ECMO) system. The system pumps and oxygenates a patient's blood outside the body, allowing the heart and lungs to rest.

Earlier that day, an aircrew made up of Airmen from the 4th and 7th Airlift Squadrons picked up an aeromedical evacuation team from the 775th Expeditionary Aeromedical Evacuation flight at Travis Air Force Base, California. The evacuation team are experts in and caring for patients during flights.

"The timing [of loading and takeoff] is a little more flexible [with an aeromedical flight] than it normally is just based on the needs of the mission," said Maj. Ian Scott, 4th Airlift Squadron pilot. "The biggest thing we have to be mindful of [with mission planning for an AE flight] is what type of restrictions the patient's condition would have on the environment in the airplane."

The patient was being transported to SAMMC, where there are more available people who are experts on the ECMO system and will be readily able maintain or repair it if something went wrong.

The patient arrived at the aircraft with several additional medical professionals from Madigan trained in keeping the ECMO system running. Before their arrival, the AE crew covered their luggage and equipment in plastic bags to lessen the risk of cross-contamination and everyone on the aircraft wore the appropriate personal protective equipment.

COVID-19 patient who was being cared for at Madigan Army Medical Center is loaded onto a C-17 Globemaster III by an aeromedical evacuation team from the 775th Expeditionary Aeromedical Evacuation flight from Travis Air Force Base, California, and other medical professionals from Madigan, at Joint Base Lewis-McChord, Washington, March 31, 2021. The patient was in severe respiratory distress and was hooked up to an extracorporeal membrane oxygenation (EMCO) system, which aids the body in breathing. *U.S. Air Force photo by Senior Airman Mikayla Heineck*

"What we do is to make sure that the patient's transportation goes smoothly and safely," said Maj. Paul Blycheck, 775th EAEF medical crew director. "We have to consider the safety of the patient, and everyone involved — the AE crew, the pilots, and loadmasters — especially when it's something contagious, like COVID-19."

The patient was hooked up to a full ventilator, in addition to the ECMO system, so anything they were breathing out was contained, Blycheck said.

The crew successfully took off later that night and transported the patient to SAMMC where they were evaluated.

"It was good to see all of these individuals from different branches and bases come together last minute to potentially save this patient's life," said Col. Robert Lankford, 62nd Operations Group commander. "I am proud of the Airmen of the 62nd Airlift Wing for making the mission happen."

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*Active Duty*
EMERGENCY

# Texan Leads Army Medevac Company at Fort Bliss

By Spc. Isaiah Laster and Maj. Clark H. Tucker

Much has been written about the state of Texas.

The subject matter of outstanding works from John Steinbeck, to quotes from Willie Nelson and Sam Houston; they all have one thing in common: Texans.

Throughout the annals of history, this unique group of Americans has done and continues to do great things for their state and country.

One such Texan happens to work in the Iron Eagle Brigade and flies hospital helicopters. Her name is Maj. Suzannah Elizabeth Morrison.

The Plano, Texas native is the Charlie Company commander of the 2-501st General Aviation Support Battalion's Medevac unit.

With a fleet of 15 hospital helicopters outfitted with medical equipment and a team of 109 soldiers, Morrison's day-to-day job consists of everything from aviation maintenance, meetings, flight hours, and ensuring her company is always ready to answer when the phone rings.

Last week, Morrison's company's soldiers executed the first round of Medevac training at the Army's most recent hospital.

The William Beaumont Army Medical Center has moved to a new location on the Fort Bliss Army reservation, a multi-pronged effort spanning years that will finally be operational on March 28th.

*Photo Credit: Spc. Isaiah Laster*

Lonestar Dustoff crews meet with medical personnel from William Beaumont Army Medical Center to discuss MEDEVAC operations at the new hospital's helipad. *Photo Credit: Spc. Isaiah Laster*

"Medevac is all about saving lives," the Plano native says. "When we get the call, someone's life can be hanging in the balance."

Soldiers from Charlie Company, 2-501st GSAB, 1st Armored Division Combat Aviation Brigade have been working hard at executing their mission, day and night, always with a stopwatch in-hand.

"The nature of our mission means little prior planning, and everything we do has to be done flawlessly," Morrison tells us. "From the pilots in the aircraft to flight medics and mechanics, everyone has a critical piece of the pie, and it's got to be done quickly."

Morrison knows a thing or two about being a team player, and it goes back to her humble beginnings in Plano.

"I did JROTC at Plano West Senior High School and began relationships with people that have gotten me to where I am today," the Planoite said. "Maj. Napoli and 1st Sgt. Ford mentored me then, and still do today."

*continued on page 32*

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[1] Standard Specification for Nitrile Examination Gloves for Medical Application
[2] Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs
† Based on glove thickness and physical properties

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*Photo Credit: Spc. Isaiah Laster*

When Morrison went off to college at Embry-Riddle Aeronautical University, she knew Army ROTC was what she wanted to do.

"My time in JROTC in high school affirmed that I wanted to fly helicopters and serve in the Army," she said. "Maj. Napoli was an Apache pilot, and the mentorship I received in high school always kept me focused on what I knew I could become."

Morrison's relationship with both individuals lasted throughout college, and she still considers them some of her closest friends.

"When it came time to commission and start my career in the Army, Maj. Napoli flew to Daytona Beach and commissioned me," the Army pilot proudly said with a smile. "I will always remember his sacrifices and mentorship. I love telling others about how when we care about our people. It really can leave a lasting imprint on their life."

Napoli and Ford's influence on Morrison transcends military service. It's shaped how she leads her formation.

"Being a Medevac company commander is one of the highest honors of my life," she said. "Leading my unit and taking the time to get to know them, where they're from, understand their stories, and care for them is what I love most about my job."

Morrison's ethos and passion for her people are nested with the Army's "People First" campaign.

"People are at the heart of everything," she said. "It's easy to get focused on the mission – especially as a Medevac unit – but I never forget the person behind the uniform. When we take care of them, we are taking care of ourselves."

Much like those that came before her defining the domineering spirit that motivates Texans, Morrison continues to focus on the people with whom she serves alongside.

"When your number-one priority is the person, the mission will always succeed," she said.

Steinbeck once wrote that "Texas is a state of mind," and for Maj. Suzannah Morrison, that mindset rests with the people that mentored her then and with those she leads now.

*army.mil*



*Active Duty*

## INFECTION PREVENTION

# Army Dental Professionals Hone Patient Safety, Infection Control Skills

By Kirk Frady

A select group of Army dentists, enlisted dental specialists and civilian dental staff assigned to the Rhineland-Pfalz Dental Activity recently took part in specialized training that focused on patient safety and infection control with a special emphasis on COVID-19 protection.

The four-day "virtual" training event, hosted and conducted by the Organization for Safety Asepsis and Prevention (OSAP), a non-profit organization that focuses on improving compliance with safe dental practices and on building a strong global network of recognized infection control experts.

In light of the current global COVID-19 epidemic, health officials say dental safety is even more important, not only to the patient, but for providers as well.

The Baumholder Army Dental Clinic held its Retiree Appreciation Day recently providing oral health check-ups, oral hygiene cleanings, x-rays, and oral hygiene instructions to more than 20 military retirees. *Photo credit U.S. Army*

The Vilseck Army Dental Clinic held its Retiree Appreciation Day recently, providing dental cleanings, exams, oral cancer screenings and oral hygiene instructions to 25 military retirees. *Photo credit U.S. Army*

"Infection prevention and control is paramount and requires a team effort," said Lt. Col. (Dr.) Aileen Cabanada-Logan, infection prevention and control officer for Dental Health Command Europe. "Quality assurance measures are needed to ensure compliance so we can provide safe and effective dental care."

COVID-19 forced Army dental clinics to re-look at the way they conduct business and provide care for beneficiaries.

"Focusing on infection control demonstrates our commitment to safety, especially patient safety," said Cabanada-Logan. "It ensures that we are implementing the most current infection control practices, and that we are adhering to required laws, regulations, guidelines, and standard best practices."

According to dental experts, OSAP training prepares new and existing dental team members who are responsible for infection control with the basic knowledge and tools to perform their jobs.

"It was very valuable to hear some of the nation's top experts give the latest on safety developments," said Capt. (Dr.) Matthew DeJong, a general dentist assigned to the Kleber Dental Clinic in Kaiserslautern, Germany. "There are continual developments in precautionary measures regarding COVID-19 as we learn more about the disease and how it spreads.

"Our dental clinics have done a great job keeping up with the latest developments regarding patient safety," DeJong added. "Our standard operating procedures and daily routines are closely aligned with best practice recommendations delivered by OSAP."

DeJong says the training was very important in identifying relevant infection control laws, regulations, guidelines, standards, and best practices.

"Patient and dental staff safety are the highest priorities for any clinic," DeJong said. "Regular training and updates are important aspects to keeping the highest standard of safety."

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*Active Duty*
## INFECTION PREVENTION

# Expert Panel on Infection Control to Tackle COVID-19 Questions

By the Military Health System Communications Office

During the COVID-19 pandemic, the Defense Health Agency has received a flood of questions from military treatment facilities about infection control and prevention. The questions focus on providing a safe environment for patients and staff against the highly contagious respiratory virus.

"The rapidly evolving nature of this global pandemic has presented unique challenges for clinical management," said Helen Crouch, infection prevention program manager, Quality and Safety Center U.S. Army Medical Command.

The DHA responded by gathering experts from the field and created a tri-service panel known as the Infection Prevention and Control Tiger Team. The IPC Tiger Team provides evidence-based answers to approximately 475 military hospitals, medical clinics and dental clinics within the Military Health System in a timely fashion, said team member Christopher Florez. "This team provides recommendations to the DHA task force, similar to the White House task force, which provides timely consistent, unified, evidence-based guidance for decisions," added Florez, program director, EPIC Course AF/SG infection prevention consultant.

The IPC Tiger Team includes subject matter experts with various backgrounds in infection prevention and control, pharmacology, health care information technology, dentistry, quality, safety, and medical logistics. The fixed 12-member panel meets daily to review COVID-19 issues and questions from across the MHS.

Many of the questions posed to the team have dealt with personal protective equipment in different situations and potential scenarios. In April, the team began providing answers to common questions "based on the most current clinical guidance from various federal agencies, professional organizations, and peer reviewed publications," according to Crouch.

The IPC Tiger Team is also taking requests for video consultations that leverage virtual health capabilities to provide "real time" assistance. Recently, the team conducted its first virtually enabled consult about infection control and prevention with the U.S. Naval Hospital Guam. "We are extremely excited to offer this capability," Crouch added.

Personnel with the United States Public Health Service Commissioned Corps help staff with the donning and decontamination of Proper Protective Equipment in Detroit, Michigan, April 17, 2020. U.S. Northern Command, through U.S. Army North, provide military support to Federal Emergency Management Agency to help communities in need. *U.S. Army photo by Spc. Miguel Pena*

Under normal circumstances, infection prevention and control is key in any health care setting. Such measures directly impact the readiness of service members, explained Crouch. In the swiftly changing health care environment of COVID-19, the goal of the IPC Tiger Team is to provide unified expert guidance to the field, she said.

"We receive about 10-15 questions per week and the majority of the questions are complex, and require a significant amount of research. Our team works diligently to provide a concise, evidence-based, relevant answer," said Elizabeth Campbell, the infection prevention control manager at the Naval Health Clinic Annapolis.

The IPC Tiger Team has combed through research publications and other resources created by front-line health care workers to find evidence-based solutions that can protect patients, visitors, and staff in MTFs, added Campbell.

"It has been truly amazing to witness how people have come up with new and innovative ideas to deal with health care challenges related to COVID-19. There have been some fantastic ideas and processes, which will undoubtedly become best practices," she said.

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CPG



*Active Duty*
## INFECTIOUS DISEASES

# Top Medical Experts Conduct Virtual Pandemic Preparation and Response Engagement During Exercise Phoenix Express 2021

By U.S. Naval Forces Europe and Africa / U.S. Sixth Fleet Public Affairs

Medical experts from the U.S. and North Africa, participated in a virtual pandemic preparation and response exchange in support of exercise Phoenix Express 2021 in Tunis, Tunisia, May 18, 2021.

The "Pandemic Preparation and Response Virtual Engagement" event served as an opportunity for partner nations to discuss infectious disease surveillance and virus outbreak response. Participants included medical leaders from partner nations including Morocco, Algeria, Tunisia, and the United Kingdom. Members from Navy Environmental and Preventative Medicine Unit 7 presented for the U.S Navy during the discussion. These experts exchanged lessons learned from previous epidemics in their respective countries, as well as the unprecedented worldwide COVID-19 pandemic.

Through facilitated discussions, the event highlighted collaborations between militaries and local public health departments and the current goal of recovering previously infected military members. Service members from the U.S. Navy presented their experiences with outbreak responses in military and maritime environments.

"The virtual event gave us and our partner nations an opportunity to talk about some of the issues and concerns from the height of the pandemic including mental health concerns and anxiety," said U.S. Navy Cmdr. Kristina Polk, emergency medicine physician currently stationed at U.S. Naval Hospital, Naples, Italy. "It was reassuring for partner nations to hear that other nations were experiencing similar post-pandemic problems as it relates to isolation, families, and other social challenges."


U.S. Navy Cmdr. Kristina Polk, emergency medicine physician currently stationed at U.S. Naval Hospital, Naples, Italy, was one of the participants of the Pandemic Preparation and Response Virtual Engagement portion of exercise Phoenix Express 21 in Tunis, Tunisia on May 18, 2021. *Photo by Mass Communication Specialist 1st Class Debra Thomas*

Participants voiced their shared challenges during early pandemic response, which included shortages in personal protective equipment and limited accommodations for sick patients at the beginning of the COVID-19 pandemic in 2020. In cross-sharing the challenges and solutions, participants assisted each other in improving professional bio-surveillance methods, and refining other techniques learned throughout the pandemic.

"One example is our pandemic response plan," said Cmdr. Polk. "It is a living document that has to evolve. Our annual pandemic response plan was based on an influenza pandemic, but that was not what we had in this case. We had to adapt as we got more information about this specific pandemic."

Exercise Phoenix Express is one of three regional maritime exercises executed by U.S. Naval Forces Africa as part of a comprehensive strategy to provide collaborative opportunities amongst African forces and international partners that addresses maritime security concerns. This is the 16th iteration of exercise Phoenix Express. The U.S. Navy remains operational during COVID-19, following all COVID-19 safety precautions and regulations.

U.S. Naval Forces Europe-Africa/U.S. Sixth Fleet, headquartered in Naples, Italy, conducts the full spectrum of joint and naval operations, often in concert with allied and interagency partners in order to advance U.S. national interests and security and stability in Europe and Africa.

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*Active Duty*
## INFECTIOUS DISEASES

# Eight Nations Participate in West African Virtual Pandemic Exercise

By Navy Lt. Donyelle Davis

Medical experts from six African nations, the United Kingdom and the United States, participated in a Virtual Pandemic Preparation and Response Engagement on March 16, in support of Obangame Express 2021, the largest multinational maritime exercise in Western Africa. The virtual medical event served as an opportunity for partner nations to discuss infectious disease surveillance and virus outbreak response. Participants included medical leaders from Nigeria, Senegal, Côte D'Ivoire, Gabon, Liberia, and Ghana, along with medical professionals from the U.S. Navy and United Kingdom. These experts exchanged lessons learned from previous epidemics in their respective countries, as well as the unprecedented worldwide COVID-19 pandemic.

"The objective of the engagement, like Obangame Express 21, is to increase regional cooperation and interoperability. This event focused on how we can do that from a medical perspective." said U.S. Navy Lt. Amy Welkie, health security cooperation officer and the event's coordinator. "This allowed us to establish and build partnerships with our medical counterparts across the Gulf of Guinea."Ghana Armed Forces Capt. Edward Nyarko, public health director at the 37th Military Hospital in Ghana, discussed the role Ghana Armed Forces' played in the national COVID-19 response. Nyarko credits his team's experience with previous outbreaks, such as the Ebola epidemic and prioritizing response workers' mental health for his team's many successes in saving lives in Ghana.

Cmdr. Helen Cann, senior medical officer, participates in a pandemic preparation and response virtual engagement in support of Exercise Obangame Express. *Photo by Mass Comm Specialist 3rd Class Trey Fowler*

"All of us have one aim, and that is to ensure that we are prepared for any eventuality, especially for disease outbreaks," Nyarko said. "NAMRU-3 has been one of our biggest supporters as they are embedded in [the Noguchi Memorial Institute for Medical Research]." Nyarko emphasized the importance of prior multinational partnerships with the U.S. Naval Medical Research Unit-No. 3 (NAMRU-3), U.S. Africa Command (AFRICOM) and others.

Through facilitated discussions, the event highlighted collaborations between militaries and local public health departments and the current goal of recovering previously infected military members. Service members from the U.S. Navy and Royal Navy presented their experiences with outbreak responses in maritime environments. "Outbreaks are the same whether you're in a maritime environment or a land environment," said U.S. Navy Cmdr. Brian Legendre, preventive medicine physician with the Navy Medical Corps. Legendre offered a number of strategies such as room ventilation, diagnostic testing, increased cleaning protocols, and isolation of sick patients as suggested tools for combating the spread of illnesses on ships.

Participants voiced their shared challenges during early pandemic response, which included shortages in personal protective equipment and limited accommodations for sick patients at the beginning of the COVID-19 pandemic in 2020. In cross-sharing the challenges and solutions, participants assisted each other in improving professional bio-surveillance methods, and refining other techniques learned throughout the pandemic.

"It's been fabulous interacting with everyone and seeing how people have sort of faced similar challenges and come up with similar solutions," said Lt. Col Dan Burns, British Army infectious diseases consultant. "It's been brilliant, and I feel like we've learned a lot from the dialogue."

Exercise Obangame Express 2021, sponsored by AFRICOM and conducted by U.S. Naval Forces Africa, is designed to improve regional cooperation, maritime domain awareness, information-sharing practices, and tactical interdiction expertise to enhance the collective capabilities of Gulf of Guinea and West African nations to counter sea-based illicit activity.

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CPG



*Active Duty*
## LABORATORY

# AFRL Opens Research Altitude Chambers, Becomes Force in Aerospace Physiology

By Gina Marie Giardina, Air Force Research Laboratory Public Affairs

When Airmen are flying at 50,000 feet, they have to be prepared for every situation. And every piece of equipment that goes up with them must be able to function under the pressures of flight as well.

At the Air Force Research Laboratory, ensuring pilots, air crews, and all flight equipment can withstand various pressures, is one of the missions in the lab's 711th Human Performance Wing, where research and aerospace medicine converge to enhance the performance and readiness of operational Airmen.

In order for these flying Airmen and their equipment to be ready, they must be tested against such pressures. Research must be conducted. Data must be collected. Training must occur. And all of this is made possible by AFRL's human performance experts, in partnership with the Naval Medical Research Unit - Dayton, at Wright-Patterson Air Force Base with state-of-the-art facilities including NAMRU-D's spacial disorientation device called the Kraken, AFRL's human-rated centrifuge, and most recently added, the lab's research altitude chambers, commonly known as the RAC.

On May 27, leadership and aerospace physiology experts from across the Air Force came together both in-person and virtually via Zoom in a ribbon-cutting ceremony to celebrate the opening of the RAC, a family of four computer-controlled altitude chambers.

"Aerospace physiology research and training, here in the RAC and in our other facilities, is essential to the readiness of our air crews and their missions," said Darrell Phillipson, acting director of AFRL's human performance wing, who presided over the

Lt. Gen. Dorothy Hogg, Air Force Surgeon General, cuts the ribbon with Air Force Research Laboratory Commander Maj. Gen. Heather Pringle and 711th Human Performance Wing Acting Director Darrell Phillipson, during a ceremony May 27 signifying the opening of the research altitude chambers in AFRL. *U.S. Air Force photo by Richard Eldridge*

Lt. Col. Nathan Maertens, aerospace physiology division chief in the 711th Human Performance Wing, describes a decompression demonstration in research altitude chamber one following a ribbon-cutting ceremony May 27 hosted by the Air Force Research Laboratory's 711 HPW.
*U.S. Air Force photo by Richard Eldridge*

ceremony. "Today, we are standing at the DoD's epicenter of aerospace physiology research capability and expertise."

But this convergence of expertise and facilities for aerospace physiology is anything but new. In fact, it's been a plan for decades, growing and strategically relocating as technology has advanced.

Research altitude chamber three was on display following a ribbon-cutting ceremony May 27 hosted by the Air Force Research Laboratory's 711th Human Performance Wing. One of four chambers, this chamber is utilized to perform rapid decompressions as quickly as .04 seconds with qualified research participants up to 60,000 feet. *U.S. Air Force photo by Richard Eldridge*

Staff Sgt. Jonathan Rosales, the event's master of ceremonies, discussed some of the history of how military scientists and researchers have provided the Air Force and sister services, including NASA, with groundbreaking research and training relating to the effects of weightlessness, pressure, altitude, temperature, acceleration and numerous other challenges that can arise in flight dating back as far as the late 1950s, decades before the strategic stand-up of the human performance wing in AFRL in 2008. He told the audience, which included Air Force Surgeon General Lt. Gen. Dorothy Hogg, Lt. Gen. Mark Ediger (ret.), AFRL Commander Maj. Gen. Heather Pringle, and AFRL Executive Director Tim Sakulich, among others, about the historical contribution to NASA with the development of space suits used by astronauts in the Gemini and Apollo programs.

As air frames and technology advance, so does research and training. "These four research altitude chambers will give us an unprecedented capability to test and gather data, ensuring the continued longevity of flight equipment, and providing us a more complete set of tools to measure the effects of altitude on our pilots and air crews," said Phillipson. "And this larger family of test facilities, supporting labs, and world-class talent establishes AFRL, in partnership with NAMRU-D, as one of the most capable and functionally-equipped research centers in aerospace physiology in the world. These facilities ensure our air crews are ready now, and for whatever the future may bring."

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*Active Duty*
LABORATORY

# LRMC Lab Officer Named Ramstein's Top Company-Grade Officer

By Marcy Sanchez

U.S. Air Force Capt. Mary Storey, a member of the 86th Medical Squadron and chief of Core Laboratory at Landstuhl Regional Medical Center, was recently recognized as the 86th Airlift Wing's Company Grade Officer of 2020, the host wing of Ramstein Air Base, Germany, reigning over officers in the ranks of first and second lieutenant, and captain.

With over 110,000 COVID-19 tests performed at LRMC, Storey's leadership was also key to ensuring the Kaiserslautern Military Community in Germany could detect and trace the virus to prevent further spread.

"We are a 24/7 operation," said Storey. "Our mission with core lab also supports preoperative procedures), the COVID-19 mission, while also looking for ways to advance our operations through process improvement projects."

The core laboratory is comprised of hematology, chemistry, endocrinology, noncellular immunology, and urinalysis and coagulation labs which perform over 1 million clinical tests annually.

"(Working at LRMC) has been quite the experience working in a joint environment," said Storey, whose husband serves in the U.S. Army. "I think I've learned a lot and I've grown, it's definitely a different experience and taking you out of the comfort zone as well."

It was Storey's consciousness of working in a joint environment which led her to seek changes to processes for Airmen working in an Army-led Military Treatment Facility, helping streamline laboratory results to the appropriate electronic records to more than 250 Airmen assigned to the 86th MDS at LRMC.

U.S. Air Force Capt. Mary Storey, chief, Core Laboratory, Landstuhl Regional Medical Center, inspects a laboratory technician's work at LRMC. Storey, a native of Indian Heights, Indiana, was recognized as the 86th airlift Wing's Company Grade Officer of the Year, for her contributions to Joint-Service efforts to combat the spread of COVID-19 as part of LRMC. Assigned to U.S. Air Force in Europe and Air Forces Africa, the 86th AW is the parent organization of seven groups and 30 squadrons across four military installations in Germany, Spain, Belgium and Portugal.

Additionally, Storey led three professional organization surveys while serving as the chief for regional laboratory services, resulting in minimal discrepancies to include a flawless inspection at U.S. Army Health Clinic Baumholder.

While Storey's selection is an individual recognition, she credits her success to her team and explains the vast operations of LRMC's laboratory services is what led her to being selected for the recognition.

"I believe it's a team award," said Storey. "We (approximately two dozen) team members, most of them are Soldiers, and some Air Force and civilian personnel. My role as a mentor and leader is to support them, listen to them and take their feedback and anything that I can help improve and make things better that that's what I'm here for."

*osan.tricare.mil*

*Active Duty*
MEN'S HEALTH

# Be Proactive in Looking for Early Signs of Testicular Cancer

By the Walter Reed National Military Medical Center

Testicular Cancer Week is an important time to remind service members to be proactive in their health.

According to Navy Lt. Cmdr. (Dr.) Dorota Hawksworth, a urologist at Walter Reed National Military Medical Center, testicular cancer is very rare, but is most common amongst males between 15 and 34 years of age, the age bracket of many military members.

Testicular cancer is a disease in which malignant cells form in the tissues of one or both testicles. While the diagnosis of cancer can be frightening, testicular cancer can usually be cured.

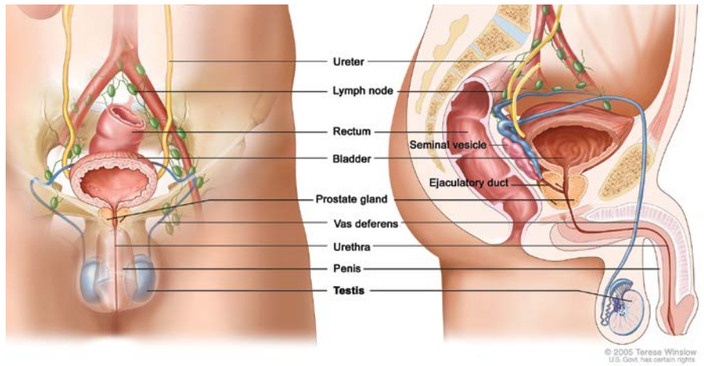
Air Force 2nd Lt. Kylee Bolinder (left), 60th Inpatient Squadron nurse, cleans a power port on Nicholas Pilch, 60th Air Mobility Wing. Pilch underwent chemotherapy for testicular cancer in 2020. It is important for servicemen to do monthly self-exams to screen for early signs of testicular cancer. While rare, testicular cancer is most prevalent among men between the ages of 15-34. *Photo by Nicholas Pilch, 60th Air Mobility Wing Public Affairs*

"Many men have no known risk factors," said Hawksworth, "the known risk factors [for testicular cancer] can't be changed."

These risk factors include a personal history of undescended testicle or prior testicular cancer, family history of testicular cancer, HIV infection, diagnosis of Klinefelter's disease, age, race, and ethnicity, Hawksworth noted. White males develop testicular cancer at a rate four times higher than that of Black males, according to cancer.gov.

Testicular cancer can be detected early through screenings both at home and by a doctor.

"Screening means looking for cancer before person has any symptoms. This process is performed differently, depending on the type of cancer," said Hawksworth.




Testicular cancer however has no standard routine or screening. According to Hawksworth, most testicular cancers are found by a man or his partner, either by chance or by a self-screening.

Self-exams should be performed monthly and in a warm environment such as a bath or shower to allow the scrotum to be more "relaxed," Hawksworth noted. Then each testis should be felt separately, using both hands to ensure that the contour is even and smooth with an egg-like shape with both testes about the same size.

If during a self-exam a patient finds a nodule or hard mass on or around the testicle, a size change, or difference in one or both testes, pain, or if the patient "thinks" he feels something and is unsure, he should seek medical attention urgently.

According to Hawksworth, most tumors present with a painless mass or swelling in one or sometimes both testes. Testicular pain only occurs in about 10% of men with testicular cancer. Men may have systemic, as opposed to localized, pain, "they may complain about breast swelling, back pain, or an abnormal pain or mass," said Hawksworth.

If caught early enough, many testicular cancers can be removed through surgery. According to cancer.gov, testicular cancer has a 95% five-year survival rate.

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*Active Duty*
MEN'S HEALTH

# Preventable Men's Health Problems

By Airman 1st Class Melody Bordeaux

It's no secret men often ignore medical issues and put off going to the doctor. However, to help live a long and healthy life, getting regular check-ups can make a difference.

"The current trend is most men live to be 76, [while] most women live to 80-something and 50 percent of these deaths are preventable," said Joseph Lukan, 59th Surgical Operations Squadron urology nurse consultant. "Men have classically had a reluctance to seek help because of the traditional 'I am a tough guy' [mentality]."

Men have various medical screenings available to detect issues early on. "The rule of thumb is you want to get a prostate exam done every year after the age of 50," said Lukan. "Screening should start at 40 if your dad or brother has had prostate cancer."

The American Heart Association recommends screening cholesterol levels every four to six years starting at age 20. Also, the American Diabetes Association and the American Cancer Society recommends screening for diabetes and cancer starting at age 45.

While screenings are important, when it comes to caring for one's health, it's about caring for the body as a whole. "A lot of the time people have this misconception that they're coming in just to be treated for their knee or their shoulder, but we're not just treating pain," said Capt. Logan Davis, 59th Surgical Operations Squadron orthopedic resident. "We're treating the person and helping them get back to the things that make them truly happy, whether it's a sport, playing with their kids or just being able to do their hobby. In reality those functional things are going to mean more to the patient."

Along with receiving treatment when needed, it's important to stay physically active. "I'm a really big fan of cardio in disguise so I like playing sports," said Davis. "Even walking for extended periods can really boost your overall health. Another thing I enjoy doing is cycling. It's good to boost your cardiovascular health as well by challenging your heart to work harder and training your muscles and joints can help prevent future injuries."

While improving cardiovascular health, staying active can also help with weight control which also impacts men's health. "For men, if your waistline is more than 40 inches, all that abdominal fat is gobbling up your testosterone and converting it into estrogen," explains Lukan. "Now you've got this vicious cycle where you have no energy and don't work out."

Along with a multitude of health problems, physical activity helps combat loss of bone density as patients age. "Some of the best stuff you can do for promoting bone density is leading an active life, anything from running, hiking to weight-lifting," said Davis. "Our bones respond to the loads that we ask them. People who jump, or lift a lot of weights, their bones become stronger naturally over time."

Along with physical benefits, exercise can also have a positive impact on mental health. "All of these things overlap with each other," said Davis. "The more physically active we are, the more endorphins our body releases. Exerting ourselves in a way we enjoy boosts our mental health, and boosts our immune system by decreasing some of the hormones like cortisol."

Oftentimes people don't prioritize their mental health, but it plays a large role in leading a healthy life.

"Human beings are not necessarily equipped to be able to cope or handle terrible events and, unfortunately, post-traumatic stress disorder is very common," said Maj. John Blue Star, 59th Medical Operations Squadron clinical health psychologist. "Some reasons that people may experience distress and difficulty occur after [various events such as] seeing combat, a loved one being injured or killed, being in a car accident, or sexual abuse or assault. All of these have the potential of having an impact on your mental health. It's important to be able to experience sadness, loss, regret, happiness or joy, but especially after a trauma it might be harder to feel [healthy] feelings and easier to feel [unhealthy feelings], and then we can get stuck. Many can benefit from coaching and mental health treatment."

It's important to address health problems as they arise because what may have started out small, if left ignored, can grow into something more serious. "There's a reluctance to go in and get seen because a problem becomes real," said Davis. "If you wait too long then it might actually be more of a problem so that can make things a little harder in long-term recovery. The sooner that we can be seen can usually prevent more problems developing downstream."

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*Active Duty*
MEN'S HEALTH

# Men's Health Focus on the Mental, Physical & Emotional Health Aspects

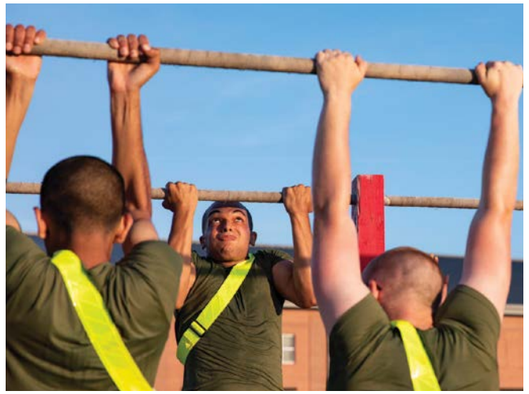
By Laura Stassi, MHS Communications

As the nation bears through another year under COVID-19 pandemic, we reminded that mental, physical and emotional health are all aspects.

Again this June, the Defense Health Agency focuses on men's overall health centered on screenings and other evaluations; and lifestyle choices, including tobacco and alcohol use. But according to the Centers for Disease Control and Prevention's most recent National Health Interview Survey , men are far more likely than women to go two years or longer without seeing a physician or other health care professional.

Experts don't necessarily think men are healthier than women. Rather, men may be avoiding making medical appointments. "I think a lot of us may have that tough man syndrome, the overall machismo mentality that whatever it is, I can power through it," said Air Force Maj. (Dr.) Matthew Hawks, assistant professor in the Department of Family Medicine at Uniformed Services University of the Health Sciences in Bethesda, Maryland.

But regular appointments have proven vital for the prevention, detection, and early treatment of illness and disease. So what are men waiting for? Whether making a virtual or in-person appointment, here are some tips for preparing to talk with a health care provider.



Recruits with Charlie Company, 1st Recruit Training Battalion, executed a formation run and multiple exercise stations during physical training on Marine Corps Recruit Depot Parris Island, S.C. May 19, 2021.
*Photo by Marine Sgt. Dana Beesley*

### Learn your family health history

Family health history may influence a man's risk of developing heart disease, stroke, diabetes, and certain types of cancer, according to the CDC. Health care providers can assess risk factors and recommend specific screening tests.

For example, men ages 18 to 35 should have their blood pressure measured every three to five years, Hawks said. But those with a family history of high blood pressure may require more frequent screenings. And while screening for colorectal cancer usually begins at age 45 or 50, "If you had a parent who had colorectal cancer before the age of 60, we start screening sooner," Hawks said.

### Make a list of questions and concerns

Are you feeling pain, dizziness, or fatigue? Are you having trouble sleeping? Take note of when you first recognized any changes. The CDC recommends leaving space between each observation to record the health care provider's comments and recommendations.

Hawks said men also may want to consider these questions: "What's changed in your life? What's going well, or not going well?" He also recommends asking loved ones if they've noticed anything that should be brought up at a medical appointment.

"Some of the literature suggests that one of the most common reasons men make medical appointments is because their spouse or significant other tells them that they should," Hawks said.

### Vow to be open and honest

Men should be forthcoming about everything, including their use of prescription and over-the-counter medications, alcohol, and tobacco and vaping products. Providing complete and accurate information enables providers to offer the best guidance, Hawks said. For example, men with any smoking history should get an abdominal aortic aneurysm screening at age 65.

Hawks said men who plan for their appointment will likely feel more confident, not only about the meeting but also, their future. "Taking positive control of your heath is an important factor in longevity," Hawks said.

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*Active Duty*
MENTAL HEALTH

# PTSD: Seeking Out Mental Health Care is the First Step to Wellness

By Janet A. Aker, Military Health System Communications Office

Service members, family members and veterans who suffer from posttraumatic stress disorder may repeatedly re-experience their ordeal as nightmares, flashbacks or frightening thoughts, especially when exposed to events that remind them of their original trauma, according to the Centers for Disease Control and Prevention.

They also may experience overanxious watchfulness or a tendency to withdraw or avoid situations and people that remind them of their traumatic experience, CDC said.

About 93,346 service members received care for PTSD in the MHS between fiscal year 2016 and fiscal year 2020, according to the Military Health System Management Analysis and Reporting Tool.

"Of that group, 19,114 were diagnosed prior to any deployment, and 74,232 were diagnosed during or following deployment," said Holly O'Reilly, a clinical psychologist and acting section chief for Implementation Clinical Care at the Psychological Health Center of Excellence in Silver Spring, Maryland.

Data available from the MHS Data Repository show that in 2019, approximately 1.8% of active-duty service members had a PTSD diagnosis, O'Reilly said.

The Department of Defense patient-centered medical home initiative includes mandatory annual screening for PTSD (among other mental health conditions) for all beneficiaries of the MHS.

### Warning signs

Medical providers and family members should be alert to the following symptoms that require attention:

- Pronounced desire to avoid other people that continues for weeks or months
- Increased jitteriness or jumpiness that does not go away after an initial transition home
- Unsettling memories or flashbacks to wartime events that do not resolve after the transition home
- Chronic headaches, unexplained personality or cognitive changes that could indicate a Traumatic Brain Injury
- A pervasive sense of sadness, guilt or failure that does not improve
- Angry outbursts, irritability, escalating family arguments or physical fighting that is uncharacteristic or prolonged
- Changes in alcohol use
- Risk-taking behaviors
- Thoughts of death or a death wish (Call 9-1-1 immediately)

"Recognizing that you may have symptoms of PTSD and reaching out for treatment is a sign of strength," O'Reilly said.

The DOD has been at the forefront of developing effective, evidence-based treatments for PTSD that reduce the severity and duration of PTSD symptoms.

"Improvement of symptoms can be seen relatively quickly," O'Reilly explained, with "many people noting a significant improvement after 5-6 sessions depending on the type of treatment and type of trauma."

"To relieve symptoms of PTSD, it's important to process the trauma and/or learn to think differently about the traumatic event," O'Reilly said.

"Evidence-based trauma-focused treatments can help you navigate through the traumatic memories and lead you to symptom improvement."

Some of these first-line treatments include: prolonged exposure, cognitive processing therapy, eye movement desensitization and reprocessing, brief psychotherapy, narrative exposure therapy and written narrative exposure, O'Reilly said.

First-line treatments for PTSD "typically lead to symptom reduction or resolution with 8-16 sessions using various combinations of exposure or cognitive restructuring."

Second-line treatment recommendations include drug treatment, or individual non-trauma-focused psychotherapy, such as stress inoculation training, present-centered therapy, and interpersonal psychotherapy, she added.


Mr. Scott Palomino, 301st Fighter Wing Airman and Family Readiness Center director, is a survivor of a deadly mortar attack at Balad Air Base, Iraq, April 10, 2004, that took the life of Airman First Class Antoine J. Holt. At the time of the attack, both airmen were assigned to the 603rd Air Control Squadron at Aviano Air Base, Italy. *U.S. Air Force photo by Tech. Sgt. Charles Taylor*

The COVID-19 pandemic also may have had a negative impact on those with PTSD symptoms, O'Reilly said.

"Many service members have been social distancing and complying with stay-at-home orders. The social isolation may contribute to feelings of alienation and disconnection," O'Reilly said.

"For some, feeling disconnected or alienated may contribute to PTSD symptoms through loss of social support or lead to a negative interpretation of other's behavior."

O'Reilly also said that for other people with symptoms of PTSD, "they might feel more anxious than usual. COVID-19 has serious health consequences and for many the stressors of the pandemic have been unpredictable and at times overwhelming."

When the pandemic began last year, many DOD mental health clinics quickly pivoted to provide telehealth treatment, she said.

Now, "as the pandemic restrictions are beginning to lift, some have returned to face-to-face treatment. Please reach out to your local clinic to see if telehealth options are available," O'Reilly suggested.

### Overcoming stigma to promote help-seeking

Air Force Capt. Felicia Keith, a staff psychologist in the mental health clinic at the Spangdahlem Air Base, Germany, said that the stigma of mental health care has had an impact on getting PTSD sufferers into treatment.

"Often times, the concern about how mental health care can negatively impact their career keeps them from self-referring to the mental health clinic," she said.

"Anecdotally, I have noticed that the older population within active duty is more hesitant to seek care," she said, "while I believe for younger (populations) it seems more socially acceptable to be in therapy."

In her experience, "it is usually the older population that believes that they don't need therapy, or they can "tough it out." The younger generation seems to be more willing to come for help.

"However," Keith added: "That does seem to depend on the younger (service member's) cultural and familial background in that younger service members who come from families who do not "believe" in mental health treatment tend to struggle to ask for or accept treatment when needed."

"If you have PTSD, there is hope," O'Reilly stressed.

"First-line treatments can lead to symptom reduction even if treatment begins years after the traumatic event. Please don't hesitate — seek help, and talk to a mental health provider if you have symptoms of PTSD."

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*Active Duty*
MENTAL HEALTH

# AFMC Enhances Leadership Support for Suicide Prevention

By Marisa Alia-Novobilski, Air Force Materiel Command

With the right contacts, tools and resources, a person can do just about anything.

At the Air Force Materiel Command, a new initiative aims to better prepare leaders to develop more resilient Airmen and support suicide prevention activities across the mission.

In a memo issued this month, Lt. Gen. Carl Schaefer, AFMC Deputy Commander, established a 30-day window for a new leaders to conduct an immersion with their local installation Violence Prevention Integrator (VPI) focused on suicide prevention. The immersions will equip leaders with the tools and resources to foster cohesive, connected unit cultures and more resilient Airmen.

"Leaders play a critical role in suicide prevention and response, and we're taking extra steps to ensure they understand their role and the resources available to support them," said Schaefer. "Losing a member to suicide always has a significant impact on a unit. We need to surround our leaders with the support structures to help prevent suicide and provide all the required resources, if an unfortunate event occurs."

The immersions will provide an opportunity for leaders to learn of the various installation support agencies and will include an overview of current messaging, prevention and intervention resources, annual by-law training requirements and more. Leaders will work directly with their installation VPI and local providers, establishing key relationships that will carry through their leadership service term.

"During a crisis, leaders will work side-by-side with the support agencies, which is why the early immersion is so critical," said Mike Owens, AFMC Violence Prevention Program Manager. "When leaders know where to go for help and support, response times are shortened, and recovery can begin."

Leadership support and engagement is an essential element of the Air Force Suicide Prevention Program. The AFMC Integrated Prevention and Resilience office facilitates the implementation of the Air Force program for the command, with the immersions an extra step to ensure leaders understand their roles in suicide prevention and are equipped with the right resources in the event of a crisis.

"These immersions will support leaders to foster an AFMC culture of resilience and connectedness that encourages personnel to seek help early" said Owens.

To supplement the information provided during the immersions, AFMC has expanded the resources available in the "Leadership Toolbox" on the command instance of the USAF Connect mobile app. This toolbox contains links to checklists, guides and resources to assist leaders in working through challenging events with their teams.

The toolbox also contains the AFMC Leaders Post-Suicide Checklist which provides guidance for leaders following a suicide event. As a supplement to local policy, it incorporates "lessons learned" from others who have experienced suicide deaths in their own units.

"Postvention efforts are intended to provide everyone who is exposed to a loss by suicide with immediate and long-term support. These efforts are vital to overcoming the loss and include providing individual and collective opportunities for healthy grieving," said Owens. "The checklist helps leaders as they actively work with the members of their teams to respond to the event and overcome challenges as they begin the process of recovery."

The recent changes are part of a continued focus on driving greater resiliency in AFMC Airmen and to help reduce instances of suicide across the service.

Additional information on Air Force-wide resiliency programs is available in Air Force Instruction 90-5001, Integrated Resilience. AFMC Airmen can visit the AFMC Connect website for local resiliency resources and trainings support.

"We're taking deliberate action to address the crucial role leadership plays in resiliency and suicide prevention. Strong, resilient Airmen and leaders are key to the AFMC We Need," said Schaefer.

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Armed Forces Medicine 2021

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NEUROLOGY

# Neurodiagnostic Technologists Learn about Brain Disorders & Care

By Lisa Braun, Medical Education & Training Campus

Neurodiagnostic Week, April 18-24, is an annual campaign that serves to bring attention to and acknowledge the efforts of neurodiagnostic professionals around the world. This year in particular has been particularly challenging with the Coronavirus pandemic, as neurodiagnostic technologists face additional challenges while remaining committed to providing a high-level of patient care.

NDTs, including those in the military, perform many tests that diagnose problems with the brain and nervous system, as well as sleep disorders. They use state-of-the-art digital equipment to record electrical patterns throughout the brain and nervous system, which result in valuable data that the doctor needs to diagnose and treat their patients. The data gathered from these tests can help diagnose conditions like epilepsy, other seizure disorders, strokes, degenerative brain disease, and traumatic brain injuries, among others. Military NDTs usually work in hospitals and clinics.

Military NDT training is conducted at the Medical Education and Training Campus on Joint Base San Antonio-Fort Sam Houston, Texas. Students in the METC NDT program arrive with a medical background, either as a Navy hospital corpsman or Air Force medical technician.

Tech. Sgt. Stephanie Shishido, Air Force Service Lead and instructor for the METC NDT program, is one of only 48 neuro techs in the entire military. "The NDT career field is amazing to me," she stated. "We have the autonomy to work independently from a neurologist, and our studies can directly dictate the course of treatment and/or diagnosis."


Air Force Senior Airman Jamila Basit, a student in the Neurodiagnostic Technician program at the Medical Education and Training Campus at Joint Base San Antonio-Fort Sam Houston, practices the electrode application method required for performance of the electroencephalogram, or EEG, on fellow student Navy Seaman Marcus Falcon.

The program is split into two phases. Phase 1 takes place inside the METC medical instructional facility classroom and simulated laboratory where students learn how to use specialized equipment and perform a variety of procedures to diagnose numerous disorders and diseases. One of the most common tests that NDT students learn is the electroencephalograms, used to assess brain activity. Students also learn how to perform other tests that detect and record magnetic fields in the brain, track brain and nerve function during surgery, and diagnose sleep disorders.

In phase 2, students transition to both military and civilian military treatment facility in the local San Antonio area, where they conduct the clinical portion of the training that includes hands-on patient care. This portion of the course provides students practical experience with hands-on patient care, enhancing their medical knowledge and proficiency. This training prepares students to exercise judgment and accept responsibility in performing diagnostic procedures while performing patient care.

Additionally, METC NDT students are afforded an opportunity to challenge a national certification exam and graduate as Registered EEG Technologists. Senior Airman Christine Smith, a student in the program, was first introduced to NDT when she attended a career fair while enrolled in the METC Aerospace Medical Service Apprentice program.

"I enjoy being able to specialize and be able to learn about various brain disorders and how to diagnose them," Smith said. "I have always been fascinated with the human mind and am now very excited to learn all about the human brain!"

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*Active Duty*
NURSING

# Nurse and Tech Week: Battle-tested and Ready

By Shireen Bedi, Air Force Surgeon General Public Affairs

This time last year, as the world was trying to wrap its head around an unknown and unforgiving new enemy, Air Force nurses and medical technicians found themselves on the front lines of COVID-19.

Air Force nurses and technicians have remained battle-tested and ready for a fight like this. Saving lives amid insurmountable odds and in the face of unprecedented challenges is what Air Force nurses and technicians remain ready for. The COVID-19 pandemic shined a light on their incredible resilience and dedication to their fellow service members, their patients and their nation.

This week, the Air Force Medical Service recognizes the continued contribution, sacrifice and dedication of its nurses and technicians. These Airmen continue to raise the bar on what it means to serve as an Air Force medic.

A short sample of some of the stories showcasing the work of Air Force nurses and technicians in the past year are highlighted below:


U.S. Air Force Maj. Tynikka Houston, an Individual Mobilization Augmentee, assigned to New York Health Hospitals Jacobi, is deployed to New York City in support of the Department of Defense. COVID-19 response, May 8, 2020. U.S. Northern Command, through U.S. Army North, remains committed to providing flexible Department of Defense support to the Federal Emergency Management Agency for the whole-of-nation COVID-19 response. *U.S. Army photo by Spc. Genesis Miranda*

### Deployed to nation hotspots

Nurses and technicians deployed to some of the hardest hit areas to provide additional support in overrun hospitals. With short notice, nurses and technicians worked tirelessly alongside sister services and their civilian counterparts to provide critical support when and where the nation needed them.

Maj. Tynikka Houston, an operating room nurse with the 59th Surgical Squadron, Joint Base San Antonio-Lackland, Texas, deployed in May 2020 as an Individual Mobilization Augmentee assigned to New York Health Hospitals Jacobi. She was assigned to an intensive care unit there to care for COVID-19 patients.

"We basically go wherever they need us," she said.

When the Federal Emergency Management Agency requested additional medical support in North Dakota's hospitals, critical care nurses primarily fulfilled that vital need.

"A short notice CONUS deployment tasking in support of the NORTHCOM combatant commander to fight a pandemic is unprecedented for this medical group," said Col. Matthew Hanson, 96th Medical Group commander.

"This time, we can't shoot or even see the enemy. We will gown up in our [personal protective equipment] and do our best," said Capt. Ronald Golemboski, a 96th Health Care Operations Squadron nurse, who had previously deployed to combat zones.

Many Air National Guard and Air Force Reserve medics battled COVID-19 in both their military and civilian roles. Staff Sgt. Thomas Massa, 192nd Medical Group Detachment 1 aerospace medical technician, has a fulltime job, working as an emergency room medic at Riverside Regional Medical Center in Newport News, Virginia. He also provided COVID-19 response support to the Virginia Department of Emergency Management and the Virginia Department of Health.

"In Detachment 1, we are the people who dress up in hazmat suits and have gas masks on, but one of the things we always practice is putting on our PAPR (Powered Air Purifying Respirator)," Massa said. "The training became useful when COVID started, and we had to intubate more and more people to help

Staff Sgt. Thomas Massa, 192nd Medical Group Detachment 1 aerospace medical technician, poses for a photo at Riverside Regional Medical Center, Dec. 23, 2020, in Newport News, Virginia. Massa has provided medical support through the COVID-19 pandemic in both his civilian and military capacities. *U.S. Air National Guard photo by Tech. Sgt. Lucretia Cunningham*

them breathe. The medical staff [at Riverside Regional] all had to wear PAPRs. My experience really played a huge part in the COVID response because I could be there to help doctors and nurses put on their PAPRs, something they've never had to do before."

Maj. Telisha Johnson, chief nurse for the 113th Medical Group, D.C. Air National Guard, was among many Air Force medics who lead COVID-19 response efforts. She jumped at the call to coordinate with leadership and local organizations to mitigate the spread of COVID-19.

"First, I was deployed to the [D.C.] Department of Health to assist in planning an alternate care site … [and] figuring out the staffing situation [where there was] a medical surge amongst the hospitals," said Johnson. "When we got to the alternate care site, I was responsible for not only training personnel [who] would be coming there from MedStar [Health] but also I was going to be the operations chief for the alternative site."

U.S. Air Force Maj. Telisha Johnson, nurse practitioner, 113th Medical Group, District of Columbia Air National Guard, poses in front of the Women in Military Service to America Memorial at Arlington National Cemetery in Arlington, Virginia, March 5, 2021. *U.S. Army National Guard photo by Staff Sgt. Erica Jaros*

Capt. Jennifer McGuigan became an Air Force Reserve critical care nurse at age 50 at the height of the pandemic and the need for additional medical support across the country was critical.

"The need for critical care nurses was highlighted during the response to COVID-19," said Col. Sherry Hemby, Air Force Reserve Command's command nurse and career field manager. "Many patients diagnosed with COVID-19 had difficulty breathing and were placed on ventilators to assist in their recovery. Critical care nurses, with their amazing attention to detail, were needed to watch every minute. They assessed changes in their patient's condition and reacted with the most skilled care. They pulled patients through the COVID crisis. They held the hands of their patients when their family members could not, encouraging and cheering their patients on to fight for recovery."

Capt. Jennifer McGuigan, left, recently joined the Air Force Reserve at age 50. Facing a shortage of critical care nurses, the Reserve granted an age waiver for McGuigan. Here she is pictured with civilian co-worker Iris Appenrodt. *Photo courtesy of U.S. Air Force*

Aeromedical evacuation crews took their capabilities into new territory by transporting COVID-19 patients, ensuring they deliver the same high reliable care seen in the clinic. This is no easy task when it comes to mitigating the spread of a highly infectious respiratory disease in a confined aircraft. Amid the pandemic, nurses and technicians put their experience and training to the test when they flew with the Negatively Pressurized Conex for the first time on July 1, 2020.

"This was definitely not your typical patient movement mission," said Maj. Benjamin Weaver, bioenvironmental engineer and 10th Expeditionary Aeromedical Evacuation Flight NPC support team lead. "It was a long 22 hours for everyone involved, but the NPC and team performed exceptionally well to make it happen."

Lt. Col. Penny Cunningham, Pacific Air Forces Command flight nurse, also noted the quick coordination that took place to execute the mission.

"This mission was a great display of how aeromedical evacuation operates, from our logistics team procuring personnel






Airmen assigned to the 313th Expeditionary Operations Support Squadron transfer a COVID-19 patient following the first-ever operational use of the Negatively Pressurized Conex to transport 12 patients aboard a C-17 Globemaster III aircraft at Ramstein Air Base, Germany, July 1, 2020 to receive higher level of care at the Landstuhl Regional Medical Center, Germany. The NPC is the latest isolated containment chamber developed to transport up to 28 individuals with infectious diseases. *U.S. Air Force photo by Airman 1st Class John R. Wright*

protective equipment kits for pilots and other personnel to ensuring crew bed-down and transportation was firmly established," she said. "No matter what AOR we are in, we always have AE members that will support and ensure the mission and crew are taken care of."

Air Force nurses and technicians have a long history of turning aircraft into a flying hospital, treating a wide range of patient challenges and ensuring service members can get to higher levels of care quickly.

"It's amazing how quickly a non-scheduled mission can spin up and we are sent out the door ready to take on however many patients, any type of health issue from medical health and non-battle injuries to battle injuries," said Maj. Christine Cardoza, 379th Expeditionary Aeromedical Evacuation Squadron flight nurse. "Once in the [aeromedical evacuation] system, the patient's survival rate, I believe, is more than 98%! Being a part of that is an honor in itself."

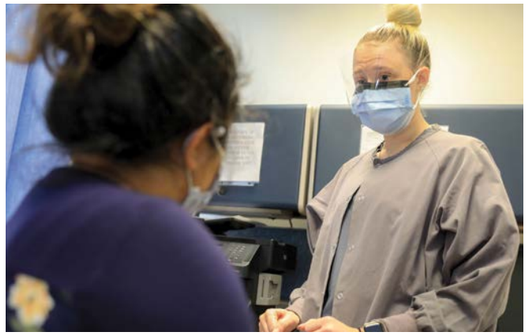
At both military treatment facilities and civilian hospitals, nurses and technicians had to quickly adapt to COVID-19, developing protocols and procedures to improve lifesaving capabilities and mitigate the spread within the clinic.

For Maj. Mark Gosling, a registered nurse, 81st Medical Group, Keesler Air Force Base, Mississippi and his Simulation Laboratory Team, this meant modifying the design of their intensive care unit beds to optimize them for ventilated COVID-19 patients.

"The patient is always our number one focus, but this frame of thinking is even more important when you're dealing with critical care from a COVID standpoint," said Gosling. "When you're using ventilator techniques on a patient, they can't tell you what they're feeling, or if they're uncomfortable. They're completely dependent on you and how in tune you are with their needs now and throughout their care. So we need to be thinking multiple steps ahead."

Improving how staff responded to potential COVID-19 symptoms among their patient population fell into the hands of Airman 1st Class Tara Somers, a medical technician at Landstuhl Regional Medical Center, Germany. She developed an algorithm for staff to use when patients called with possible symptoms, developed a telephone script, and initiated a patient tracker.

"(The process) also provides more complete care to our patients and makes them feel like they are being prioritized when they



U.S. Air Force Airman 1st Class Tara Somers (right), medical technician, Internal Medicine Clinic, Landstuhl Regional Medical Center, assesses a patient during routine operations at the Internal Medicine Clinic, Nov. 30. To mitigate the spread of COVID-19 and identify potential COVID-19 positive patients, Somers' innovative efforts were key in developing clinic processes thereby enhancing care and increasing safety at the clinic. *U.S. Air Force photo by Marcy Sanchez*

U.S. Air Force Staff Sgt. Kayla Blanchard, 39th Medical Group Immunization technician, administers a COVID-19 vaccination to Capt. Brent Luch, 39th Security Forces Squadron operations officer, during the initial series of vaccinations Jan. 8, 2021, at Incirlik Air Base, Turkey. Prioritized DoD personnel are highly encouraged to take the vaccine to protect their health, their families, their community, and lower the public health risks associated with the COVID-19 pandemic. *U.S. Air Force photo by Staff Sgt. Ryan Lackey*

are feeling afraid in the middle of the pandemic," said Somers. "I am the only technician in the clinic specifically taking on the task. This allows me to follow providers more closely, obtain more knowledge and understanding about the pandemic and the medical threats it presents to our patient population."

Early in the pandemic, medical technicians with the 422nd Medical Squadron at RAF Croughton, England, noticed an issue with testing procedures that relied on seasonal flu procedures. These technicians pushed for clearer guidance to ensure they could obtain more accurate results. Because of medics like Tech. Sgt. Steve Zavala, 422nd Medical Squadron medical operations flight chief, and his fellow medical technicians, there were necessary improvements in COVID-19 testing procedures implemented across the Department of Defense.

U.S. Air Force Tech. Sgt. Steve Zavala, 422nd Medical Squadron medical operations flight chief and trusted care champion, demonstrates COVID-19 testing procedures at RAF Croughton, England, August 3, 2020. Zavala discovered a COVID-19 testing technique that needed to be changed, so he elevated the concern and impacted testing procedures across the Department of Defense. *U.S. Air Force photo by Airman 1st Class Jennifer Zima*

The rapid production and deployment of COVID-19 vaccines shows a promising shift in the COVID-19 pandemic. Being on the front lines themselves, Air Force nurses and technicians were some of the first to line up to get vaccinated. They also delivered shots in arms to their fellow warfighters ensuring Air Force and Space Force missions continued uninterrupted. Many of these nurses and technicians also supported mass vaccination sites across the country.

Senior Airman Ladrena Tucker, 59th Medical Operations Squadron Internal Medicine medical technician, administers the COVID-19 vaccine, Feb. 1, 2021, at Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio-Lackland, Texas. The Department of Defense is conducting a coordinated vaccine distribution strategy for prioritizing and administering COVID-19 vaccines. *U.S. Air Force photo by Airman 1st Class Melody Bordeaux*

"Volunteering to administer the vaccine to patients is important to me because people are dying from this disease," said Senior Airman Ladrena Tucker, 59th Medical Operations Squadron Internal Medicine medical technician. "I want to help end this pandemic and the least I can do is administer the vaccine."

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*Active Duty*
NURSING

# Nurses Week 2021: Nurses Continue to Advance the MHS Mission

By Claudia Sanchez-Bustamante, MHS Communications

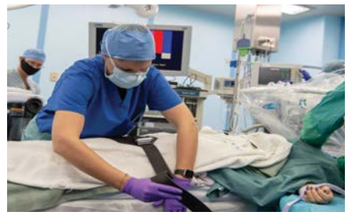
National Nurses Week honors the commitment, dedication and contributions of the nursing profession. For the nearly 30,000 nurses in the Military Health System, the recognition is especially relevant as they have served on the front lines of the COVID-19 response and take leading roles to advance military health and readiness now and in the future.

Nurses have contributed to military readiness throughout history, evolving their function with every experience. From Florence Nightingale's establishment of nurse education programs following her volunteer experience aiding wounded soldiers in the Crimean War of the 1850s, the role of nurses has expanded beyond serving in hospitals and clinics.

In 1982, President Ronald Reagan proclaimed May 6 as National Recognition Day for Nurses; and in 1990, the American Nurses Association declared May 6-12 National Nurses Week.

Today, nurses are instrumental in the fields of research, policy, science, education, informatics, and data analysis, among others, in addition to caring and advocating for patients in Department of Defense military medical treatment facilities (MTFs) across the world. During the COVID-19 pandemic, they have remained on the front lines of the MHS, undertaking the DOD's priorities to protect troops and personnel, help safeguard the nation's security missions, and support interagency government efforts to respond to the pandemic.

Recognizing this, DHA has made strides to ensure nursing continues to evolve, particularly as MTFs continue to transition from the Army, Navy and Air Force to the leadership of the Defense Health Agency.



Navy Lt. Cmdr. Amanda Kuczka, a perioperative nurse assigned to hospital ship USNS Mercy, secures a patient to an operating table April 17. Mercy deployed in support of the nation's COVID-19 response efforts and served as a referral hospital for non-COVID-19 patients currently admitted to shore-based hospitals. *Photo by Navy Mass Communication Spc. 3rd Class Jake Greenberg*

"The Defense Health Agency recognizes the value that the function of nursing provides to the patient experience of care within our Military Health System," said Army Col. Jenifer Meno, DHA's deputy chief nursing officer and deputy assistant director of Strategy, Planning, and Functional Integration. "This resulted in the development and evolution of a functional capability for nursing, which has been included as part of the DHA transition identified in the 2017 National Defense Authorization Act."

Paula Gray, who holds a doctorate in nursing practice and serves as the nursing liaison officer for DHA's Medical Affairs Division, explained how the DHA established the Tri-Service Nursing Working Groups in 2019 to establish nursing priorities and design a nursing structure within DHA.

"The strategic nursing priorities include readiness, policy and practice, research and innovation, and training and education," said Gray. "These precedents helped inform the nursing requirements as the markets and MTFs transfer to DHA."

The strategic work groups are critical in providing feedback, training, policies, and processes to improve the capabilities to support a medically ready force, according to Meno.

"They ensure integration of nursing in key strategic efforts in the DHA, further enhancing capabilities of the organization and MHS at large," she said. "An example is supporting the ability for MTFs to expand bed capacity, providing guidance on nurse training and bed staffing ratios for nursing for COVID-19."

Gray explained that the DHA's nursing workforce, which includes military and civilian nurses, works in multiple specialties across the enterprise and the world to deliver inpatient and ambulatory evidence-based, patient-centered care. It represents approximately 80% of the DHA and military manpower resources.

"During COVID, these nurses leveraged both bedside skills and virtual technologies to assure safe, high-quality care," said Gray. "MHS nurses have diligently worked in teams to develop products that facilitate standard practices as well as training across the enterprise."

As a result, nursing capabilities have been strengthened. On one hand, clinician certification and skill maintenance were enabled as the need to provide

Army Kelli Ranalli, a registered nurse with Army Health Clinic Vicenza in Italy, checks the blood pressure of a patient. *Photo by Russell Toof, Regional Health Command Europe*

standardized and recurring training across the MHS was identified. On the other, several products were developed during and in response to COVID-19.

For example, "DHA nurses designed a palliative care toolkit to provide resources for staff to have the complex end-of-life conversations related to unanticipated death," said Air Force Brig. Gen. Anita Fligge, the DHA's chief nursing officer, deputy assistant director of education and training, and commander of the Air Force element at DHA headquarters in Falls Church, Virginia.

"The Education and Training Working Group also developed standardized training for essential skills across the MHS, such as reading and interpreting a patient's cardiac rhythm," she said.

Added Meno: "To assist in the standardization to support the transition of DHA's role in administering and managing MTFs, we also developed updated policies on nursing functions, roles, responsibilities, and governance."

### Ensuring a medically ready force and a ready medical force

DHA nurses take a multi-pronged approach to assure military health and readiness, performing multiple functions to support the agency's efforts to ensure a medically ready force and a ready medical force. For Fligge, assuring patients' health and capability, as well as unit capabilities and training are key elements to executing the mission.

"Much work has been completed to identify competencies related to both the delivery of nursing care in MTFs as well as those required for deployment, she said. "These competencies are assessed on an ongoing basis, and training for these competencies is possible through common platforms that allow on-demand learning as well as live and simulation training options."

Added Meno, "The end state is ensuring high-quality care and great outcomes for our patients."

Adapting to continuous challenges during the COVID-19 pandemic has resulted in nurses effecting transformative changes in military medicine.

"COVID-19 has certainly tested the mettle of nurses and the health care system during this pandemic," said Fligge. "From the abrupt onset to the ongoing slog to provide care during the pandemic has demanded agility to adapt procedures and processes to deliver care while protecting staff, patients, and the public."

Their agility extended from the teams that were deployed to New York's Javits Center or with the USNS Mercy hospital ship to personnel who remained in fixed facilities, and also helped expand virtual care and telehealth, she highlighted.

"The entire cohort of nurses coalesced to assure high-quality, evidence-based care to all eligible beneficiaries," said Fligge.

Said Meno: "Nurses are agile and flexible, and you are seeing nurses of all specialties being able to support the efforts in providing vaccinations, caring for COVID-19 patients in ICUs and medical surgery floors, educating and teaching patients, and doing it in ways that are innovative and utilizing technology to support those efforts."

Nursing leaders demonstrated the same agility as they navigated between maintaining hospital operations and assuring staff and bed capacity were planned and expanded to meet demands, added Gray.

Yet while DHA nurses execute their mission exemplarily during COVID-19, they work to guarantee the DHA mission every day. Together with their health care teams, they keep their skills sharp to ensure personnel are always fully capable and ready.

"Whether they are designated for deployment or to assure the maintenance of unit or hospital operations, the work accomplished in the teams that spearhead education and training, research and innovation, policy and practice, and readiness is translated and applied from lessons learned," said Fligge.

And with nursing functions evolving into broader roles within health care, their varied levels of expertise contribute to advance the impact of the DHA. Fligge explained MHS nurses function across spheres of care at tactical, operational, and strategic levels.

"Nurses with additional education and training may have additional licensure that permits independent patient care management," she said. "Care may be in inpatient or ambulatory settings in general medicine or surgery for acute and chronic care, or specialties such as emergency, trauma, cardiac care, pulmonology, oncology and hematology, obstetrics and gynecology, orthopedics, neurology, rheumatology, infection prevention and control."

As such, nursing care now transcends the boundaries of fixed facilities.

For example, "nurses excel in in telehealth, providing health care through the Nurse Advice Line, or work in case management , as well as coordinating continuity of care in the home," Fligge said. "And (United States Public Health Service) personnel work in the community and collaborate with local partners, whether nationally or overseas."

"Nurses are part of the ecosystem in the care of patients, engaging patients on a daily basis, while others are behind the scenes making sure the workflows are efficient, looking for opportunities to improve the care provided," said Meno. "We focus on the priorities of the organization and care for the patients entrusted to our care."

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*Active Duty*
NURSING

# WRNMMC Nurses Recognizes Extraordinary Team Members

By Bernard S. Little, WRNMMC, Office Command Communications

Walter Reed National Military Medical Center (WRNMMC) observed Nurses Week May 10-14, and part of the celebration included recognizing nursing team members with the DAISY Award for Extraordinary Nurses.

Navy Capt. Jessica Beard, chief nursing officer (CNO) and director for nursing at WRNMMC, joined members of the DAISY selection committee as they went to work sites of the honorees to recognize them with the DAISY Award on May 14. "Captain Beard presented three months of awards as we try to catch up due to COVID-19 and the change of CNO," Joan LoepkerDuncan explained. The chief nursing officer in charge of Cardiology Service, LoepkerDuncan also coordinates the DAISY recognition program at WRNMMC.

The recent recipients of the DAISY Award at WRNMMC included: Air Force Capt. Nina Maxwell (Surgical Intensive Care Unit) for October 2020; Army Capt. Nicholas Ryan, Navy Lt. j.g. Brandon Hall, Navy Lt. Francesca Derderian, and Navy Lt. j.g. Ryan Peare (who all worked on the Medical Intensive Care Unit) for December 2020; and Joceli McAllister (5 East) for January 2021.

A staff physician nominated Maxwell for the DAISY Award, citing her "excellence not only in providing exceptional patient care, but for going above and beyond during a Code Blue situation that occurred in the unit. She remained levelheaded and was an excellent team member during the code, getting needed medication and interventions to the patient in an expedited but safe manner." The physician added Maxwell was a "strong advocate for the patient," and the nurse's "strength and compassion" led to a successful outcome for the patient.

A staff nurse nominated Ryan, Hall, Derderian and Peare for the December DAISY Award. "These four nurses' clinical skills, and especially their compassionate care, exemplify the kind of nurse that our patients, their families and our staff recognize as an outstanding role model. They demonstrate compassion, advocacy, commitment, professionalism, exceptional care, and consistently perform as team players," the nurse stated. The nurse described the efforts of the four in securing a British flag flown in front of the U.S. British Embassy in Washington, D.C. for the family of a patient, who was active duty British military and died at WRNMMC. "I was extremely impressed by these nurses, and how they persevered in providing dignity and honor to a patient and his family. I am so proud to work with nurses like this," the nominator added.

A patient nominated McAllister for the January DAISY Award, explaining, "I was feeling weak and needing a lot of assistance with walking… I felt alone and was scared...Then, it changed. This nurse came in on one of my down days. She held firmly to me and escorted me to the bathroom. When she spoke, she was compassionate. She came to the bedside and did not try to put the lunch table between us, as I had noticed some nurses seek to do. She did not step back when I was racked with coughing, but came close to adjust my position for comfort. Some nurses actually stepped back when I coughed, even though they were gowned, masked, face shielded and with gloves. Not this nurse. She rocks!!!"

WRNMMC's DAISY selection committee chooses an honoree for the DAISY Award each month. Anyone can nominate a nursing team member for the award, and a committee selects the person who best exemplifies the following:

- Established a special connection with a patient/family
- Has significantly made a difference in the life of a patient
- Shows empathy in all situations
- Is an outstanding role model for the nursing profession
- Generates enthusiasm and energy towards meeting the challenges of nursing
- Consistently exhibits excellent interpersonal skills
- Exemplifies the essence of professional nursing in all activities

Each month's winner receives a nominee pin, a DAISY Award recipient pin, a Healer's Touch hand-carved statue and an award certificate. In addition, the DAISY Award winner's unit receives a banner to post for the month.

The family of J. Patrick Barnes established the DAISY Award for Extraordinary Nurses more than 20 years ago to recognize nursing team members for their clinical skills, caring, compassion and professionalism. The Barnes family established the award as a way to thank nurses in appreciation of the care Patrick received during the latter part of his life while a patient at a health-care facility in Seattle, Washington. DAISY is an acronym for Diseases Attacking the Immune System. Barnes died at the age of 33 of the auto-immune disease ITP (Idiopathic Thrombocytopenic Purpura) in Seattle.

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*Active Duty*
PHYSICAL THERAPY

# Medical Group Promotes Preventative Care with Physical Therapy

By Tech. Sgt. Michelle Alvarez, 380th Air Expeditionary Wing Public Affairs

Did you know that physical therapy is not just for restoring mobility or physical function following a major accident or catastrophic injury? Physical therapy is also a great tool to promote movement, reduce pain, and restore function by evaluating and treating musculoskeletal injuries early. Preventative treatment can be the key to avoiding future injuries or complicated surgeries.

This is just some of the information shared by U.S. Air Force Capt. Rebecca Wilder, physical therapist, and Master Sgt. Jessica Brock, physical therapy technician, who deployed from Scott Air Force Base to join the 380th Expeditionary Medical Group at Al Dhafra Air Base.

ADAB residents benefit from having the only physical therapy clinic in the Air Force Central Command region.

While physical therapy capabilities in a deployed location may be more limited than what your home base offers in terms of managing acute or chronic issues, ADAB's physical therapy program includes services such as therapeutic exercise, manual manipulation, dry needling, Battlefield Acupuncture (BFA), electrical stimulation and mechanical traction, said Wilder.

Brock shared that while members may be hesitant to visit the medical group out of fear of being sent home early, a physical therapist can help minimize or eliminate the need for a member to be sent home by using physical therapy methods to treat musculoskeletal injuries.

"Our purpose is to keep people in the fight longer," she said.

Wilder expressed that many members come to ADAB with fitness goals, which is awesome, but stressed the importance of listening to your body. "Sometimes being healthy is honoring your body and taking a day to rest and come back ready the next day," she explained.

"While deployed, most members begin to work out more, have harsher work environments, and work longer hours, which can result in injury," Wilder explained. "Our goal is to help members bounce back from those injuries."

"Statistically, the rate of injury is higher when dehydrated," Wilder said. "Over-exertion when dehydrated can lead to an increase in the risk of muscle strains, heat exhaustion and heat stroke, so make sure you are drinking enough water."

She added on, "if you do end up overdoing it, we are here to help!"

The ADAB physical therapy team provides regular outreach twice a week, visiting various squadrons across the Wing. Outreach sessions are great for quick consultations or evaluations and treatment of smaller issues.

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U.S. Air Force Master Sgt. Jessica Brock, physical therapy technician, and Capt. Rebecca Wilder, physical therapist, 380th Expeditionary Medical Group, demonstrate common exercises used during physical therapy sessions, Al Dhafra Air Base, United Arab Emirates, May 26, 2021. Physical therapy services are available at ADAB and include but are not limited to, therapeutic exercise, manual manipulation, and dry needling. *U.S. Air Force photo by Tech. Sgt. Michelle Y. Alvarez*



*Active Duty*
SURGERY

# Navy Surgeon General Visits Joint Base San Antonio

By Petty Officer 1st Class David Kolmel, Naval Medical Forces Support Command

Rear Adm. Bruce Gillingham, chief of Bureau of Medicine and Surgery and Surgeon General of the Navy, and Force Master Chief Michael Roberts, director of Hospital Corps, visited here June 1-2, 2021.

During Gillingham's stopover, he had the opportunity to visit Naval Medical Forces Support Command (NMFSC), Navy Medicine Training Support Center (NMTSC), and Naval Medical Research Unit San Antonio (NAMRU-SA) Navy assets on Joint Base San Antonio-Fort Sam Houston (JBSA-FSH). He also met with joint service partners and leaders of U.S. Army North, 502nd Air Wing, and Uniformed Services University – Southern Region, College of Allied Health Sciences.

After touring the Medical Education and Training Campus (METC), Gillingham had the opportunity to observe classroom labs of both basic and advanced courses and talk with instructors and students to get further insight into the courses. After visiting METC, Gillingham traveled around NMTSC to see the student housing area and meet with Sailors.

"I was thrilled this morning with the level of training that is going on in the schoolhouse and in hospital corpsman 'A' school for our Sailors." Said Gillingham. "To feel comfortable in a mass casualty situation and know what the initial lifesaving steps are, that is phenomenal training."

As an orthopedic surgeon, Gillingham was impressed by the level of medical training given to new corpsmen. As a practicing surgeon, he was fascinated by the skill of these future technicians and the level of preparation they will offer surgical teams entering operating rooms. Gillingham said he views each of these future corpsmen as force multipliers and was very inspired.

NMFSC leadership hosted the Surgeon General and Force Master Chief's visit and led the two on a whirlwind tour of the JBSA area during their short two-day stay. "The Naval Medical Forces Support Command motto is 'Medical Readiness Starts Here,'" said Rear Adm. Cynthia Kuehner, commander of NMFSC. "This week we were honored to host the Navy's Surgeon General, Rear Adm. Bruce Gillingham, and Force Master Chief Roberts to proudly showcase the substance behind our motto."

Hospital Corpsman 1st Class Forest Stewart, assigned to Navy Medicine Training Support Center (NMTSC), explains what students learn in the surgical technical course to Rear Adm. Bruce Gillingham, chief of Bureau of Medicine and Surgery and Surgeon General of the Navy, Force Master Chief Michael Roberts, during a tour of the Medical Education and Training Campus (METC) on Joint Base San Antonio Fort Sam Houston. During Gillingham's visit, he met with local leaders from the Army and Air Force, toured Navy facilities in the area, and met with Sailors to discuss the future of Navy Medicine. *US Navy photo by Mass Communication Specialist 1st Class David Kolmel*

Before departing, Gillingham hosted an all-hands call with Navy Medicine Sailors assigned to the JBSA area to thank them for their hard work, let them know that the highest levels of the Navy appreciate them, and discuss the future of Navy Medicine. "I cannot tell you how exciting it is for Force and me to be here, and what a great trip it has been," said Gillingham. "Every time I come to San Antonio I am reminded of the immense power that is generated here."

Gillingham and Roberts expressed their appreciation for what Navy Medicine Sailors, civilians and contract support staff do every day on our One Navy Medicine team of dedicated professionals. "What you do every day counts, what you do every day is extremely important," said Roberts. "Listen, learn and lead that is what you do here. There is no one better than your team and I want to thank you for that." "Both of us are extremely grateful for what you do whether you're advancing the science of medical care at NAMRU-San Antonio, teaching the future (Sailors) that will replace us, that will care for us on a daily basis, or sharing your knowledge. Whatever capacity you serve here in San Antonio, thank you," said Gillingham.

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*Active Duty*
SURGERY

# NMCSD Neurosurgeons Performs Hospital's First Procedure Using 3D Surgical Microscope

By Petty Officer 3rd Class Jacob L. Greenberg

Neurosurgeons assigned to Naval Medical Center San Diego (NMCSD) performed a herniated disk repair procedure, and for the first time at the hospital, used a 3D surgical microscope. The 3D capabilities of this new microscope yield a multitude of benefits to surgical personnel.

"One of the major benefits to using a mobile, 3D microscope is the lack of strain it puts on the surgeon," said Michael Hinz, a representative from the microscope's manufacturer. "The surgeons can position the microscope exoscopically, meaning over the patient. The surgeons won't be hunched over and put extraneous strain on their lower back or neck. They can perform the procedure standing at ease, looking through either the binoculars or the 3D glasses onto a 4K monitor."

"The microscope has three valuable, primary modalities that benefit operating room personnel. In addition to exoscopic capabilities, the microscope can be used in a traditional manner, and as a micro-inspection tool," said Hinz. "An attachment plugs into the microscope, and surgeons have the ability to work endoscopically. This means [surgeons can place the attachment] inside of the anatomy to look around corners, for example. [They'll] generally have a better field of vision than with a normal, superficial microscope."

Cmdr. Shawn Belverud, a neurosurgeon assigned to NMCSD, led the procedure and used the new microscope. "3D integration certainly helps bring together other members of the team in the room," said Belverud. "It allows better and more germane input from partners that are helping during the operation.

*U.S. Navy photo by Mass Communication Specialist 3rd Class Jake Greenberg*

Cmdr. Shawn Belverud, a neurosurgeon (left), and Lt. Cmdr. Scott Donoughe, a neurology resident (right), both assigned to Naval Medical Center San Diego (NMCSD), perform a herniated disk repair procedure utilizing a 3D surgical microscope Dec. 6. The new 3D surgical microscope can be used in a traditional, superficial manner, exoscopically and endoscopically. 3D glasses and 4K monitors allows those not physically beside the operating table to see a stereoscopic view during a procedure.
*U.S. Navy photo by Mass Communication Specialist 3rd Class Jake Greenberg*

The provided 3D glasses and 4K monitors allow [those not physically at the operating table] to see what the surgeons are seeing. This yields another level of safety to the procedure, and thus, better outcomes."

Moving forward, Belverud said NMCSD's two 3D surgical microscopes will be used more regularly. "The introduction to this technology and this system of illumination and magnification into the neurologic practice at NMCSD sets a new standard for the community and the care of our patients," said Belverud.

Often at the forefront of military medicine, NMCSD looks toward the future for ways to make procedures safer and more efficient with better patient outcomes.

NMCSD's mission is to prepare service members to deploy in support of operational forces, deliver high quality healthcare services and shape the future of military medicine through education, training and research. NMCSD employs more than 6,000 active duty military personnel, civilians and contractors in Southern California to provide patients with world-class care anytime, anywhere.

*dvids news*

*Active Duty*
SURGERY

# Deployed Medics Conduct Combined Surgery

By Staff Sgt. Amanda Stanford 12th Air Force (Air Forces Southern)

Medical professionals with the Forward Surgical Section, Joint Task Force-Bravo (JTF-B), Soto Cano Air Base, Honduras, conducted a combined surgery with the local Honduran medical team and the deployed U.S. military medics at Hospital del Sur on May 18, 2021.

The team of four surgeons completed a gallbladder and kidney removal simultaneously on a Honduran patient.

"It was a very fortunate set of events that led to this surgery even being possible," said U.S. Army Lt. Col Andrew Mendendorp, chief of urology at Tripler Army Medical Center, Honolulu, Hawaii. "It was serendipity that we had a general surgery team on standby with a patient who had a general surgery and urology problem that we were able to address in a combined operation."

U.S. Air Force Staff Sgt. Melissa Carter, a surgical technician with the 88th Medical Group, Keesler Air Force Base, Mississippi, discusses sanitization practices with a local surgical technician at Hospital del Sur in Choluteca, Honduras, May 18, 2021. *Photo by U.S. Air Force photo by Staff Sgt. Amanda Stanford*

U.S. Air Force Lt. Col. Timothy Baumgartner, a pediatric urologists with the 59th Medical Wing, Joint Base Antionio-Lackland, Texas, operates on a patient at Hospital del Sur. *Photo by U.S. Air Force photo by Staff Sgt. Amanda Stanford*

The team of JTF-B medics joined the Resolute Sentinel 21 surgical readiness training exercise (SURGRETE) team on May 16, 2021, to assist during the first week of surgeries in Honduras.

"Our time with the team deployed to Honduras has been amazing," said U.S. Army Capt. Mathew Hipwell, a registered nurse with the JTF-Bravo FSS. "Quick integration, good team work, good mission. Just glad we could be here."

The team of deployed medics for the SURGRETE will complete a second week of surgeries before heading back to the U.S.

*jtfb.southcom.mil*



*Active Duty*
UROLOGY

# 59th MDW SAUSHEC Urology Residency Program Director Named Urologist of the Year

By Airman 1st Class Melody Bordeaux

U.S. Air Force Lt. Col. Christopher Allam, San Antonio Uniformed Services Health Education Consortium urology residency program director, was named Urologist of the Year by the Society of Government Service Urologists of the American Urological Association, March 2021.

The 59th Medical Wing commander coined Allam April 19, 2021, for his outstanding leadership in managing and developing education and training curriculum and the academic schedule for SAUSHEC urology residents.

Allam also serves as urology consultant to the Air Force Surgeon General and as the Air Force liaison to the SGSU board of directors.

"I am honored, humbled, surprised and very appreciative of being selected," said Allam.

The American Urologist Association oversees many organizations including the SGSU and annually asks each organization to select one member, who is within 10 years of finishing training, to represent them. The SGSU selected Allam for all of his contributions to the organization.

"I was one of the co-course directors for the annual Kimbrough Urological Seminar that the Society of Government Service Urologists held in January 2020," said Allam. "We had continuing medical education lectures and we all came together for education and fellowship."

Allam takes pride in preparing the urology residents for their future careers in the military.

U.S. Air Force Lt. Col. Christopher Allam, San Antonio Uniformed Services Health Education Consortium urology residency program director, poses for a photo with the coin he received from the 59th Medical Wing commander, at Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio-Lackland, Texas, April 19, 2021. Allam was named Urologist of the Year by the Society of Government Service Urologists of the American Urological Association. *U.S. Air Force photo by Airman 1st Class Melody Bordeaux*

"We train the residents in not only education and surgical techniques, but also in how to lead as future urologists for the Air Force," said Allam. "We're responsible for training the future urologist who care for our military service members; we are also charged with the mission of graduating Army and Air Force officers to become leaders within the medical corps."

The previous year was especially challenging when COVID-19 changed everything about how patient care was conducted, "COVID impacted our residency program and patient care as well as shifted the focus on keeping the residents healthy," explained Allam. "We had to reschedule our clinics and transition to virtual health appointments, which we were all new to, and prioritize which patients should go to the operating room and find that balance between patient care, resident education and safety for everyone."

However, through teamwork, Allam still led the residency program and continued graduating urologists.

"I'm able to multitask because I have an assistant program director, Lt. Col. Tim Baumgartner, and Ms. Lilia Neaves, our urology residency program coordinator," said Allam. "The three of us manage the program together along with eight faculty urologists who are responsible for our resident education. I couldn't do it alone."

Allam also relies on the support of his clinical and department leadership, the SAUSHEC Graduate Medical Education leadership, and from his family.

"We have great program leadership, faculty, and everybody in our urology clinic is very helpful," said Allam. "All our residents are great. It's a great team and we have a good working relationship."

Allam truly feels he wouldn't change a thing about his career in the military.

"I've been very fortunate to have great people around me who have supported me from being a young resident to where I am now," said Allam. "The Air Force has been very good to me and my family."

*59mdw.af.mil*

*Active Duty*
WOUND CARE

# Burn Center Continues Excellence with Both Old and New Technologies

By Ms. Jacqueline M. Hames, USAASC

Burns are among the nastiest wounds a person can experience, and the Army's Burn Center has been working for more than 70 years to develop treatments that speed healing and recovery.

A Soldier sustains devastating third-degree burns over 70 percent of her body when her Humvee is hit with an improvised explosive device. Her excruciating injuries leave her at risk for infection, terrible scarring and death. After being stabilized in the field, she is medically evacuated to the Army's closest burn center, where highly trained surgeons treat her wounds, ensuring that she is protected from infection and organ failure. There, they can even give her brand-new skin to replace what was lost.

This is the future of Army burn treatment at the U.S. Army Institute of Surgical Research Burn Center at Joint Base San Antonio — Fort Sam Houston, Texas. Renowned worldwide in 1970 for its cutting-edge treatment of thermal injuries — burns — the Burn Center proved the efficacy of a new burn cream, pioneered wound treatment and perfected skin grafts by that year, its 25th anniversary. Now entering its 73rd year, the Burn Center has not only maintained its reputation but continues to innovate with new skin substitutes and replacements, resuscitation techniques and inhalation injury mitigation.

## Burn Butter

The antimicrobial burn cream Sulfamylon was introduced in January 1964, said Dr. Leopoldo C. Cancio, director of the Burn Center. The sulfonamide drug family, of which Sulfamylon is a member, is used to treat bacterial infections like bronchitis, eye infections and bacterial meningitis. That family of drugs has been around for decades, and the active ingredient in Sulfamylon, mafenide acetate, was not new. But using it as a cream to prevent infections in burn wounds was.

"Surgical Research Institute Enters 25th Year of Burns Research," a February 1970 article in Army Research and Development Newsmagazine, the predecessor to this magazine, detailed how, after extensive laboratory study, investigators at the Burn Center put the drug into a water-soluble white cream to be applied topically to burned areas.

"That is the compound which that article refers to as 'burn butter,' and it is used to this day for the treatment of burn wounds," Cancio said. "Since then, there have been a lot of other products that have come out and that we use for burn wounds treatment, but Sulfamylon was really the first and foremost of those treatments."

In the 1940s and '50s, an otherwise healthy adult with burns over 40 percent of his body had a 50-50 chance of surviving, said Dr. Basil A. Pruitt, former commander and director of the Burn Center. The survival rate improved by 1970; that year Pruitt, then a lieutenant colonel, told reporters that Sulfamylon successfully prevented infection in second- and third-degree burns covering up to 60 percent of the body, and reduced the bacteria count in burn wounds more effectively than any other known topical application.

"Today, if you have an 80 percent burn, you have a 50-50 chance of living or dying, and that's real progress," Pruitt continued. "That's statistically documentable progress." The medical staff at the Burn Center is responsible for that progress.

## Treatment and Care

The delayed approach to surgery at the Burn Center in the 1970s meant leaving a burn wound open and debriding it — removing dead, damaged or infected tissue — daily in hydrotherapy to prepare the patient for a graft. While that approach was sound, it still left patients open to the risk of infection, even when Sulfamylon was applied.

"We don't do that anymore," Cancio said. Now, the center performs excision — the surgical removal of dead tissue--as soon as possible, especially if the patient has deep wounds, before grafting with the patient's own skin or a homograft--donor skin.

Speed of care is a key factor with burn wounds, Pruitt said. If burned and dead tissue remains on the patient, it not only can increase the risk of infection, but also increase the amount of scarring that could occur, particularly if the wounds are deep. "You take it off, it limits any extension of tissue destruction by any invasive bacteria," he said.

Another key factor in burn care is the patient's ability to heal. Accelerating wound healing, particularly in patients with extensive wounds, is a goal of the Burn Center. Two future technologies, ReCell and StrataGraft, are closest to accelerating healing, Cancio said.

"ReCell is a technology in which we take a small biopsy of the patient's normal skin, we scrape off the epidermal cells from that biopsy, we dilute them in a solution and we spray it onto the freshly excised wound bed. And those little skin cells grow and populate the wound bed and replace it with skin. So, sometimes ReCell is referred to as spray-on skin," he said.

ReCell has completed Phase III clinical trials, meaning that the Burn Center is waiting to hear from the U.S. Food and Drug Administration and the manufacturing company that the product is available for purchase and, therefore, clinical use. "As I understand, that will happen pretty soon," Cancio said.

StrataGraft is a ready-made, off-the-shelf skin substitute comprising two layers. One layer is an epidermal component — the outermost layer — and the other layer is a dermal component, the layer of tough connective tissue beneath the surface. "The epidermal component is derived from an immunologically privileged epidermis from neonates called NIKS cells. Those cells will not be immunologically rejected by the patient, unlike every other type of skin we might transplant from somebody else to a patient," Cancio said.

NIKS, or near-diploid immortalized keratinocyte skin, is made with keratinocytes, cells that make up the vast majority of natural human skin and primarily protect skin from environmental damage, like bacteria.

NIKS cells used in the StrataGraft treatment "are basically a special type of skin cell that comes from somebody else and we put them on the patient's excised wound bed and, ideally, this technology will go ahead and become part of the patient. And then over time, the patient's own skin cells will grow into the product and replace the epidermal cells from somebody else with the patient's own cells," Cancio said.

StrataGraft is still in clinical trials, Cancio said. The Burn Center is participating in two of those trials; one to evaluate the product in patients with partial-thickness (second-degree) burns and another to evaluate the product in patients with full-thickness (third-degree) burns.

## Universal Model

The Burn Center has expanded its mission in the decades since 1970, from focusing almost exclusively on burns to encompassing many aspects of mechanical trauma as well as burn injuries.

"In a very real sense, the burn patient is the universal trauma model," Pruitt said. "That is, everything that happens in the burn patient, in terms of organ system dysfunction, pretty much happens in mechanical trauma patients." Patients who are shot, for example, experience the same changes that burn patients experience, except that mechanical trauma patients' experiences are accelerated, causing life-threatening changes at a faster rate.

"So, the mission of the unit has expanded to include all of trauma, including combat injury patients, and it has, in the last several years, become the center of combat casualty care research by the integration of all three military services, Army, Navy and Air Force," he said.

The National Defense Authorization Act for Fiscal Year 2017 mandated that the primary mission of the military health system is readiness, Cancio said. The center continuously brings in medical personnel from all over the armed services for team training. "We believe that this burn center contributes significantly to training people to be prepared to deploy to the combat zone and take care of severely injured patients," he said.

The complexity of burn care is not just restricted to a skin problem. Major burns impact all organs and systems of the body, Cancio said, from the psychological, to the heart, lungs, kidneys and the patient's ability to function from a physical and occupational therapy standpoint. "All those organ systems are affected by burn injury, so whether you're a critical care nurse, a surgeon, whether you're an occupational physical therapist or another therapist, respiratory therapist, you get excellent exposure to very critically ill patients at this Burn Center, so we feel that our training mission has only intensified with the publication of a mandate to focus on readiness," Cancio said.

In recent years, the Burn Center hosted eight Japanese doctors who have gone on to be prominent burn surgeons and trauma surgeons in their home country, Pruitt said. Two Belgian army surgeons came to study, staying for six months each. The center also hosted the surgeon general of Norway, he said.

## Conclusion

Pruitt, who retired from the Burn Center as a colonel after 27 years there, still teaches surgery at the Burn Center one day a week. He is particularly interested in the research and clinical studies the center has expanded into, such as the proper amount of resuscitation (intravenous) fluid for patients, computer-guided resuscitation and the mitigation of inhalation injury. Cancio is active in the management of the inhalation injury and computer-guided resuscitation programs.

During the early parts of the wars in Iraq and Afghanistan, medical staff at the Burn Center noticed some burn patients were receiving too much resuscitation fluid in the first 24 to 48 hours after injury, Cancio said. The fluid is required to replace ongoing losses to the injured tissue and elsewhere in the body. "Some patients received a quarter of their body weight in saltwater over one day. When this fluid leaks into the arms, legs or abdomen, too much swelling can cause life- or limb-threatening problems," he said.

To help avoid over-resuscitation and better guide resuscitation decisions, the Burn Center developed a computer called Burn Navigator, manufactured by Arcos Medical Inc. of Houston. "This product made it through the Army product acquisition process for use in battlefield medical treatment facilities and is also available commercially around the world," Cancio said.

Combat casualties in the same wars experienced smoke inhalation injury rates that were twice as high as those in civilian burn centers because of the use of improvised explosive devices on personnel in vehicles. "To improve the care of patients with these and other severe lung injuries, the Army Burn Center became the home of a new program in adult extracorporeal

*Veterans*
SPECIAL FEATURES

# Second to None: An Inside Look at the Creation of the Veterans Health Administration 75 Years Ago

By Katie Delacenserie, Historian, Veterans Health Administration

The year 2021 marks the 75th Anniversary of the founding of the Department of Medicine and Surgery within the Department of Veterans Affairs (VA), which evolved into what is now the Veterans Health Administration (VHA). Much like today, America found itself at an uncertain crossroads in 1946. The issue of health care was front and center for many, as 16 million Americans prepared to return to civilian life. United States Army Gen. Omar Bradley and the team of doctors he assembled challenged an antiquated health care system with a stunning and rapid transformation not often seen before or since in the federal government. Though, the path to what would become the largest health care system in the nation was not always clear.

## SOLDIER'S GENERAL BECOMES VETERAN'S GENERAL

Bradley, the architect of the D-Day invasion, was sworn in as administrator of the Veterans Administration, just one day after Victory over Japan Day, August 15, 1945, while the nation celebrated the end of four long years of war. President Harry S. Truman selected his fellow Missourian as the one who could modernize and streamline the practices of the largest independent agency in the federal government and prepare for the largest demobilization in history. Speaking to a group of reporters afterwards, Bradley acknowledged his hesitations as he stated, "I don't think there's any job in the country I'd sooner not have nor any job in the world I'd like to do better. For even though it is burdened with problems, it gives me the chance to do something for the men who did so much for us."

General Omar Bradley was sworn in as Administrator of the Veterans Administration, an architect of the Department of Medicine and Surgery, oversaw changes to the way VA doctors were hired, forged partnerships with academic institutions, and changed the location and look of VA hospitals ushering in a 3rd Generation of VA medical care. *Credit Library of Congress.*

Bradley, who was known during the war as "The Soldier's General" now found himself "The Veteran's General." Once sworn in, he became responsible for 16 million Veterans returning from war in a rapid demobilization not seen before or since in this country. Bradley also inherited the VA after it had seen its share of scandals and mismanagement, culminating in the Bonus Army Marches of 1932 that were still fresh in the nation's mind. Determined to remake the VA and armed with the unprecedented support of the public, the President, Congress, and the media, Bradley set out with a battlefield mentality towards reforming health care for Veterans. World War II (WWII) was not the first time Americans had come home from war; and it was also not the first time America would lead the world's response to Veteran health care.

## VETERANS HEALTH CARE BEFORE WWII

VHA's original ancestor was the National Home for Disabled Volunteer Soldiers. On March 3, 1865, a month before the Civil War ended and the day before his second inauguration, President Abraham Lincoln signed a law establishing the National Soldiers and Sailors Asylum. Commonly known as "Soldiers' Homes," soldiers who fought for the Union Army, including U.S. Colored Troops, were eligible to enter the homes. The first National Home opened near Augusta, Maine, in November of 1866. The National Homes contributed many important firsts in American history: they were the first government homes and hospitals built for *volunteer* soldiers and not military careerists; they were the first racially integrated federal civilian institutions; and they provided the first national domiciliary, educational, occupational, and recreational programs for Veterans. Occupational and recreational therapies were not recognized programs or professions until the early 20th century; however, their practice at Soldiers' Homes provided the seedbed for later growth and benefited thousands of Civil War Veterans. By 1929, this Federal system of Civil War Soldiers' Homes had grown to 11 institutions spanning the country.



World War I resulted in the second-largest system of Veterans hospitals established by the government. In 1918, Congress tasked the Bureau of War Risk Insurance and Public Health Service (Treasury) with operating hospitals specifically for returning World War I Veterans, which they did for roughly three years. The first consolidation of federal Veterans programs took place when Congress created the Veterans Bureau on August 9, 1921. Public Health Service Veterans hospitals were transferred to the bureau and an ambitious hospital construction program commenced. The second consolidation of Federal Veterans programs occurred on July 21, 1930, when President Herbert Hoover signed Executive Order 5398 and elevated the Veterans Bureau to a federal administration, officially becoming the Veterans Administration. The National Soldiers' Homes became part of the Veterans Administration at that time. A majority of existing VA medical centers began as Veterans Bureau or Public Health Service Veteran hospitals. With the proliferation of modern warfare during WWII and advances in medical science during the interwar years, the nature of the care Veterans received required dramatic changes as well. For the first time, the U.S. military saw more casualties due to combat injuries than diseases such as trench foot and typhoid. Similarly, implementation of the first battlefield evacuation systems, anesthesia, and infection control enabled more service members to return home with wounds that were not previously survivable. This resulted in a larger Veteran population that required extended medical care for their injuries sustained in battle.

## SECOND TO NONE: HAWLEY'S PLAN

In 1945, when Bradley became the VA's administrator, the G.I. Bill was over a year old. This landmark piece of legislation ensured medical care for both service and non-service-related injuries, as well as rehabilitation for Veterans. What awaited the nearly half a million returning patients needing medical care were 100 existing VA hospitals — often located in rural areas, overcrowded, and understaffed. One of Bradley's first and best decisions was to enlist Dr. Paul Hawley, the former top military medical officer of the European theater, as his top medical advisor. Hawley found the situation dire, saying "It was a mighty sick thing we took over, and there aren't going to be any miracles." Undaunted, Hawley also knew that returning Veterans deserved a health care system that was "second to none" and pursued that goal, alongside Bradley, to expand access to health care.

Dr. Paul Magnusen, General Omar Bradley, and General Paul Hawley, MD (L-R) were the architects of the Department of Medicine and Surgery and oversaw changes to the way VA doctors were hired, forged partnerships with academic institutions, and changed the location and look of VA hospitals ushering in a 3rd Generation of VA medical care.
*Credit Medical Care of Veterans. 90th Cong., 1d sess., 1967, pg. 213*

Most pressingly, Bradley and Hawley needed to recruit thousands of doctors to meet the growing demand. The War and an outdated process of hiring through the Civil Service System left the ranks of VA doctors depleted and a remaining available workforce for hire that was around 60 years old. Bradley and Hawley also knew that the best doctors were coming out of medical school, so Hawley, along with Dr. Paul Magnuson, a VA orthopedic surgeon, led the charge to create a partnership with America's medical schools. Partnering with schools would allow VA to benefit from the research and teaching talents of these institutions, provide training for Veterans pursuing medical education after the war, and gain a younger and more innovative workforce that could be hired outside the limited confines of the Civil Service System.

Increased funding and research was directed at providing artificial limbs and rehabilitation training to new amputees under the direction of VA Administrator Omar Bradley and Medical Director Paul Hawley.
*Credit National Library of Medicine.*

In addition, If Hawley and Magnuson wanted to affiliate with the best medical schools, then the location and structure of VA hospitals themselves would need to change. The sprawling Soldiers' Homes that followed the Civil War and campus-like hospitals of WWI were often located in rural areas and subject to being built as congressional projects. Hawley's blunt reaction spoke volumes. "To hell with the scenery, I want the finest doctors," he said. Bradley and Hawley knew that in order to serve the greatest number of Veterans, new hospitals would need to be condensed into taller structures, located near larger cities and medical schools, and incorporate the latest in hospital design. A greater emphasis was placed on innovation in these "Third Generation" hospitals and large amounts of space were dedicated solely to research in what was slated to be the largest hospital construction project at the time.

The Fort Hamilton VA Hospital in Brooklyn, New York was one of many new hospitals that were built in the Post World War Two era. Moving hospitals away from rural areas, introducing the skyscraper look, and dedicating large amounts of space to research were hallmarks of these "3rd Generation" structures. *Credit New York Public Library.*

Pushing the restructure of VA health care was not easy. Negotiations over legislation grew tense over hiring practices in late 1945, and Bradley and Hawley threatened to resign if their desired plans for change were not met. In the end, with overwhelming support, Bradley and Hawley's ambitious plan prevailed, setting the stage for a year of rapid-fire transformation.

### 1946

Public Law 293 formally established the Department of Medicine and Surgery within VA on January 3, 1946, cementing the proposals Hawley, now the Department's first medical director, introduced. Days after, the first affiliation with a medical school was established between Northwestern University of Illinois and the Hines VA Hospital. Between 1946 and 1947, Bradley and Hawley, armed with a half a billion-dollar budget, continued to change the face of VA health care services, undertaking key initiatives, including:

- Converting 55 former military hospitals into Veteran facilities, increasing the number of hospitals from 97 to 125, and planning for an additional 70 new hospitals, constituting the largest hospital building project in American history through the addition of nearly 40,000 beds.
- Establishing the Office of Academic Affairs and creating partnerships with 63 medical schools.
- Recruiting 4,000 full-time VA physicians, nurses, technicians and other medical personnel.
- Incorporating mental health services and facilities into the design and operations of new VA hospitals for the first time, re-envisioning the concept of the modern general hospital.
- Creating a pilot program known as the "Hometown Plan" to allow Veterans to be treated by local physicians, expanding access to care where VA care was not available, providing payments for services for 6 million Veterans.
- Absorbing VA's research and development capacity, committing to spend more than $1 million each year, beginning with a focus on improving prosthetics for Veterans with limb loss.
- Establishing the VA Voluntary Service to augment and complement VA's professional health care staff, gaining 72,000 volunteers by the end of the 1940s.
- Establishing the Veterans Canteen Service to provide low-cost goods to Veterans, their families, and caregivers.
- Treating 882,000 hospital patients.
- Expand women's medical care by hiring Dr. Margaret D. Craighill to become the VA's first Chief Medical Consultant on the medical care of women Veterans and appointing the first ten women doctors.
- Growing VA staff from 65,000 in 1945 to 200,000 by 1947.
- Dedicating research space into plans for new hospitals to study prosthetics, paraplegia, epilepsy, tuberculosis, spinal cord therapy, blindness and more.

While Bradley and Hawley made enormous strides in transforming Veteran health care, Veterans of color would endure a slower pace than that of white males to fully experience the transformation of their health care. In a mark on his legacy, Bradley chose not to integrate existing VA hospitals, and instead focused on integrating hospitals that were being newly constructed. Ultimately, VA hospitals were not fully desegregated until 1954.

### THE SPLENDID NUCLEUS: THE LEGACY OF BRADLEY AND HAWLEY 75 YEARS LATER

General Omar Bradley left VA in late 1947 to return as Chief of Staff of the Army and Dr. Hawley left shortly thereafter. What they achieved in just two years was the miracle they once thought unachievable. One magazine wrote that, "In two years General Omar N. Bradley has transformed the medical service of the Veterans Administration from a national scandal to a model establishment." In creating the foundation for the modern VHA of today, the spirits of Bradley and Hawley still live on 75 years later, as countless doctors, nurses, volunteers, students, and public servants strive to make their own miracles every day to ensure Veterans health care remains second to none in this nation. Over the years, these collaborations have resulted in groundbreaking innovations in medicine, nursing, and research that have touched Veterans. Hawley's comments upon President Truman signing the legislation creating the Department of Medicine and Surgery still inspire and challenge VA today: "With the signature of the Medical Department Act, our objective is clear — a medical service for the Veteran that is second to none in the world. Around the splendid nucleus of excellent men and women in the VA medical service, we shall build an outstanding service."

CPG





*Veterans*
SPECIAL FEATURES

# VHA After 75 Years: Comprehensive Health Care Maintained by Rising Budgets

By Elizabeth Bass and Heidi Golding, Congressional Budget Office, Washington, DC

Approximately 9 million veterans in 2020 were enrolled for health care provided by the Veterans Health Administration (VHA), about half of the total number of veterans in the United States. Just over 6 million of them sought care from VHA in that year.

VHA offers a standard benefits package to veterans that includes hospital and ambulatory care, prescriptions, and many other aspects of health care such as long-term care services, counseling, and homelessness programs. Most medical services or products are delivered within VHA facilities, a network of about 170 medical centers and more than 1,000 other outpatient clinics, vet centers, and nursing homes, constituting one of the largest integrated health care delivery systems in the U.S.

VHA has evolved considerably from its establishment as the Department of Medicine and Surgery in 1946. Over the years, VHA has transformed from a primarily hospital-based system available to relatively few veterans into an organization offering a wide-range of services to a large number of veterans. In addition, VHA has played a major role in U.S. health care by partnering with major medical schools to conduct research, allowing over half of the nation's medical residents to get part of their training at VA hospitals, and developing new therapies for spinal cord and traumatic brain injuries, prosthetics, and suicide risk.

Today, VHA has features few or no other American health care providers or insurance companies offer. Several of those distinctions include:

- VHA serves a unique patient population: former members of the armed forces who served on active duty. (Veterans must enroll to receive care from VHA, and when they do, they are placed in one of eight priority groups reflecting any service-connected disabilities they may have, their income, and other factors.)

  Many enrollees have injuries or disabilities that were incurred or aggravated during military service; about 55 percent of enrollees have one or more of those disabilities. VHA also cares for veterans with no disabilities including those who meet VA's thresholds for low-income, about 20 percent of its enrollees.

  The agency operates a substantial Office of Rural Health, constructing facilities and mobile clinics in remote areas and supporting programs for the one-third of its enrollees who live far from cities. Most of VHA's enrollees are men, but the share of women is growing and is now about 10 percent.

- The vast majority of care is delivered directly in VHA-owned and operated facilities. VHA hires its own clinicians and other employees, and uses federally-mandated price controls to negotiate lower-priced drugs from pharmaceutical companies.

- The type and the mix of services and benefits that veterans receive from VHA differs somewhat from what is covered by typical health insurance plans. For example, enrollees rely heavily on VHA for certain specialized mental health care, such as treatment for mental health disorders or substance abuse. Veterans may receive assistance from a social worker or reimbursement for transportation costs to medical appointments. Some aid is extended to family members who may receive a monthly stipend to care for severely disabled veterans.

- VHA pays for patients to receive care from outside providers. The new Veterans Community Care Program (VCCP) allows veterans to see outside providers when specific requirements are met, including the availability of VHA care and the circumstances of individual veterans. More veterans are seeking such VA-paid care than previously.

- Enrollees pay no premiums or enrollment fees and little or nothing out-of-pocket for VHA care. In 2020, VHA enrollees spent, on average, less than $50 on copayments (or less than 1 percent of the costs of their care). By contrast, most enrollees in Part B of Medicare (which covers physicians' services) paid premiums of $145 per month in 2020 and are typically responsible for paying 20 percent of the costs for their care.

What is the cost to provide those benefits? Each year, the Congress approves VHA's funding through appropriation acts, which means the Congress has direct control of future spending by the Department of Veterans Affairs.

In 2020, VHA received $81 billion for its programs, and an additional $17 billion in March 2020 in emergency funding during the COVID pandemic. The agency estimated spending about $15,000 per veteran patient, and, for most patients, VHA provides only a portion of their care.

The Congressional Budget Office projected in a 2018 report that, assuming larger appropriations were enacted to reflect VHA's current policies and to implement VCCP, VHA spending could grow by about one-third between 2017 and 2028 (after adjusting for inflation).

Assuming appropriations grow based on historical rates of growth per recipient, spending could increase slightly more than that rate. (Changes in economywide health care costs, economic conditions, or VA policy could shift that trajectory up or down substantially.)

Military service involves hardships and VHA provides care for veterans with injuries received during military service. If lawmakers do not fully fund VHA's medical care requests, the Secretary of Veterans Affairs may be required under current law to rescind enrollment for some veterans in order to provide care for the others.

Providing funding to VHA involves trade-offs among the Congress's choices about federal spending, taxes, and deficits.

CPG







*Veterans*
SPECIAL FEATURES

# Specializing Care for Individuals of Size

By Tom Adams, Dr. Tony Hilton, and Jill Earwood

Higher risk populations of bariatric patients ranging from a weight between 300 to 1,000 pounds have greater limitations of mobility that can be very challenging for their caregivers. The Department of Veterans Affairs is committed to providing the highest level of care for patients with specialized needs such as these, by continuing development of technologies and procedures that perpetually improve patient outcomes.

Leading development in this field is a highly specialized team at The Veterans Health Administration headed by Dr. Tony Hilton DrPH, MSN, FNP, CRRN, Safe Patient Handling and Mobility National Program Manager, Occupational Safety and Health in VA Central Office, Washington DC, and Jill Earwood MSN-HCQ, RN, CSPHP, VHA Office of Nursing Service Liaison for Safe Patient Handling & Mobility, Western NC VA Healthcare System Safe Patient Handling & Mobility Coordinator/Nursing Quality Manager.

What struck me most in our conversation was their true passion to honor their patients by combining compassionate care with the most advanced technologies. The result of their work has produced a foundation of results that continues to advance both inside and out of the VA system.

"We have a number of technologies available that should be considered and a plan of always continuing to find even better ways to advance, where the technology and resources are sometimes very limited", said Dr. Hilton, "It's because of these high risk complications that we feel this is an important area the VA should really look at and always find ways do things better."

An overview of how their process begins with each encounter with patients and includes highly educated guidance available to caregivers beyond the VA is described by Jill Earwood. "We

SimLearn Excellence in Veterans Healthcare Team. *Photo courtesy of the Department of Veterans Affairs*

SPHM simulation training at the VA's Orlando SIMLearn Center.
*Photo courtesy of the Department of Veterans Affairs*

begin the process in the VA by assessing and screening our patients, from their clinic appointments to their admission and throughout their continued care, and that screening allows us to choose the technology the facility has to complete high risk tasks required to mobilize these patients. "We provide several resources for our staff, including an application they can download on smart phones or access via the web [https://mobile.va.gov/app/safe-patient-handling] that anyone can access. This application uses algorithms to help guide the care and equipment selection for mobilizing regular size individuals as well as individuals of size. We also have available guidebooks for both safe patient handling in general and bariatric specific care. These guidebooks are available on the Tampa VA Research and Education Foundation's website (tampavaref.org/safe-patient-handling/implementation-tools.htm) and we also have links for those for all of our staff to be able to access and are loaded on the mobile app as well for anyone to access."

In addition to making these resources available to all caregivers inside and out of the VA community, Dr. Hilton describes how the VA is partnering with other caregivers in their community for input towards continued improvements and education. "These resources are available to everyone with the knowledge that we are always improving the technology as updated as we learn," stated Dr. Hilton, "We partner with professionals in our community and other community efforts because we want to make sure our Veterans are taken care of outside the VA and getting the same level of care we expect them to receive in a VA setting."

Ms. Earwood expanded on how specialized training would help achieve this level of care by saying, "Specific to training for direct care providers throughout the VA, we do have requirements regarding the Safe Patient Handling and Mobility (SPHM) technology for equipment, and that all staff who are going to care for those individuals of size are to be trained for it. This training is done upon the new employee orientation and follows through with extensive hands on training to achieve clinical competencies for the use of this technology. It is critical the training be done in advance by learning in a simulation lab, which is the safest environment conducive to learning as opposed to with a patient initially, which is why this is our goal and focus. We use case studies as a great way to start the initial encounter and walk the staff members through what it will look like in the outpatient setting and across all settings in the healthcare system like imaging, dental, vision, pathology, the perioperative environment or any other location like acute care, ICU, long term care, or short stay, rehab, and hospice units.

Our national program office offers training at our VA simulation center in Orlando Florida, where we take the individuals who attend through these case studies so they can practice using the right technology in that large simulation environment. Every two years we rotate where we bring the subject matter experts from the facilities called SPHM Facility Coordinators then each alternate year we bring therapy partners of occupational and physical therapists to the center to be trained on using that technology, not just for staff and patient protection but also for therapy side because the technology can certainly help with individuals of size in terms of therapy, and then the stakeholders take that information back to both the VISN and the healthcare system to replicate the training as closely as possible because usually there's innovations that we want to share and spread, and then at the local level resources are provided so that direct care staff can access instructions, video clips, skills checklist, etc. in a formal way of checking off for competency with the high risk tasks and record that in the system that the healthcare service uses for maintaining competency records."

How can expectations of anticipated equipment and technology that are needed for patients of size by a facility be better achieved as a form of readiness from these methods to meet such specialized needs?

Earwood explains, "We have some creative healthcare systems, one in particular has identified their spaces and locations for care throughout their system. They have identified the weight capacities of rooms and such using a calculator and database where the nursing supervisor of the day enters the patient's information in the calculator with other specifics about the patient and then they are sent to a page that identifies all the patient rooms appropriate for that size patient, where the equipment is throughout the facility that will accommodate that particular patient and gives them a bird's eye view of what they should plan and do. We have another healthcare system example where each room has a specific weight thresholds limit, once a patient meets a threshold they are placed in an appropriate room, and this has become a part of most healthcare systems now. Another example is one facility that, rather than choosing to maintain a fleet of specialty beds for individuals of size, rents the beds so they always have the most advanced technology available and certainty the beds will be functional at all times, they are not just sitting and waiting to be used.

*continued on page 70*

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So the healthcare systems do have designated spaces and are aware of what those are and what their capacity levels are. As far as the percentage of bariatric beds and the facilities anticipating the use of those, we track patients nationally each year and Dr. Hilton pulls that data on where those patients are being seen, and categories for different weights that correlates definitively with geographic locations where we know bariatric populations are common anyway, not just in the VA. We see patterns where different VISNs have larger percentages than others as we see in the population of area as well.

We share this information with healthcare systems and VISNs, so they can look and verify the accuracy of the data, and more importantly identify who these patients are by name and what they anticipate their needs are so they can prepare their healthcare systems to have enough designated rooms and spaces to meet their needs. For most healthcare systems in VA, one to two patient rooms or bed spaces per unit are designated as bariatric. This means wider doors and ceiling lifts accommodating more than 500 pounds, specialized bathrooms, toilets, showers, etc. that meet the needs of the patient's size. Of course this number may be different depending on the local needs of the systems, but it is usually about one to two patients rooms per unit for 24 hour space."

A Department of Veterans Affairs employee is simulating a patient of size being cared for using a special sling (purple device) and ceiling lift (not shown). The sling and lift are being used to hold up the simulated abdominal pannus (apron-like excess of skin) during a training session at the Orlando SIMLearn Center at a Conference in January 2020.
*Photo courtesy of the Department of Veterans Affairs*

Dr. Hilton added, "The needs of patients of size can change as their weight changes. Once that happens, we have to look at what the patient's functional ability is, if they can actually get up and move around and walk, to provide them independent care to a certain extent, and that also helps us to know what kind of room, space and technology they are going to need. The patients are screened for those very special conditions, if they are coming in for a specific procedure that is taken into account, and then once those spaces have been identified then that is where the patient will go. But before that happens, we have construction guidelines specifically written and published for these spaces that are being put together, so its not something you have to do a makeshift with but rather something you plan for in advance to build your spaces to accommodate them. There is a lot of thought that goes into those spaces. You plan door sizes up to 60 inches wide and you look at the circumference of where the technology is being located in those spaces. You cannot use the same space for a regular patient as you do versus a bariatric patient. Those guidelines and standards are printed and available out there to anyone, and the VA has actually led in defining what those standards are and we are really happy to be able to continue to learn about how we can make it better each day."

The VA's partnerships include a highly valued one with the Department of Defense. Dr. Hilton expanded on this by saying, "We are really excited about partnering with the DoD, and we will continue to doing this because there is a transfer of care across our organization and the VA is really strong on making sure that we are making this transition as smooth as possible, even when there are family members involved we want to make sure those family members stay intact, that our Veterans and their families are safe, so we are very happy that we can talk with the DoD and share what we are doing with patient handling and we want to continue to partner with the DoD."

For more information on how you can access these VA resources and share in community partnerships, please contact https://www.publichealth.va.gov/employeehealth/patient-handling/index.asp

Safe Patient Handling and Mobility (SPHM) and Bariatric Guidebooks are available via the SPHM VHA APP and also through the Tampa VA Research and Education Foundation's website: SPHM VHA APP
https://mobile.va.gov/app/safe-patient-handling

Tampa VA Research and Education Foundation
http://www.tampavaref.org/safe-patient-handling/implementation-tools.htm

**Additional Resources:**

Injured Nurses by National Public Radio
http://www.npr.org/series/385540559/injured-nurses

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*Veterans*
ADDICTION

# VA STAR Program Model of Success for Substance Abuse Recovery

By Erin Curran, public affairs specialist at the Ralph H. Johnson VA Medical Center in Charleston, South Carolina

When faced with challenges in life, one of the most difficult steps can be asking for help. It's not easy to share your struggles and it can be particularly difficult if your challenge is marked with a stigma like drug addiction.

When faced with challenges in life, one of the most difficult steps can be asking for help. It's not easy to share your struggles and it can be particularly difficult if your challenge is marked with a stigma like drug addiction.

As the Peer Support Specialist in the Substance Treatment and Recovery (STAR) program at the Ralph H. Johnson VA Medical Center, Tyrone Jarmon works with Veterans to overcome their addictions. Jarmon offers a unique perspective on their recovery because he's been there — multiple treatment programs, strained relationships, lost jobs and rock bottom.

"When I got out of the Army, I was successful," said Jarmon. "I had good jobs in telecommunications and I made good money. There is never just one type of person who has substance abuse problems."

Jarmon struggled with alcoholism and cocaine use.

"When I first went into treatment… my attitude about it wasn't very good," Jarmon said. "They said I needed to go to treatment for a while, so I said, 'Oh I'll go.' I kind of looked at it like a joke almost."

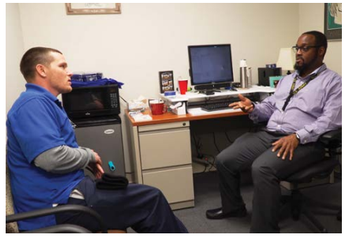

*Photo courtesy of Los Angeles County*

Jarmon recalls his alcohol and drug use started slow casual, and then spiraling out of control.

"I had the means to do it [drugs], so I did. I was just having fun," he said.

After several rounds of treatment, Jarmon ended up in a shelter in Raleigh, North Carolina, with only $5 and a tank of gas to his name. That was his rock bottom.

"When I got there, I was ready to do anything at that point. It wasn't a joke anymore."

Reality hit him hard, but he eventually made the decision to move forward, to ask for the help he knew he needed and to not look back. The Durham VA Medical Center referred Jarmon to treatment at the Asheville VAMC. This was his first time getting substance abuse treatment at VA.

"What I learned in that program is that there were a lot of things I hadn't worked on before," said Jarmon. "It wasn't just about me and the alcohol and the drugs, it was about a lot of the underlying things that were going on in my life–my anxiety and some self-esteem issues and some things that weren't dealt with from my military career."

The whole-health approach was something Jarmon had never experienced in treatment before, and it helped lay the foundation for what is now a decade of sobriety.
Jarmon understands the effectiveness of treating multiple issues along with substance use, and he brings that experience and approach to the STAR program at the Charleston VAMC.

"In the STAR program, we help Veterans who have substance use issues and other underlying issues. We have a well-rounded team to help them with any mental health issues they may be having. It's basically a one-stop shop."

Within the STAR program, Jarmon's main job is to model recovery for other Veterans. It seems simple, but sharing his deeply personal story and demonstrating that recovery is possible for Veterans in the program gives Veterans a face, and a friend, they can relate to. Sharing with someone who has overcome similar struggles can remove the stigma and make it less daunting to ask for help.

Jarmon works with Veterans on step-by-step goal planning, and then connects

Photo courtesy of Los Angeles County

them with community resources to give them ideas about some things that work for recovery. They also discuss overall wellness and recreation activities.

The STAR program's treatment approach has changed over the years.

"[The program's] a little different than it was at first," said Jarmon. "Instead of us just sitting around talking about substances, we talk about how not to get to that point. It's not always about the substances — that's the end symptom."

How did the Veterans get to the point of abusing substances? That's what the collaborative care team focuses on. Jarmon works alongside social workers, psychologists and psychiatrists — each is invested in helping the Veterans get back on their feet.

"I get just as much, or more, [out of the program] than the Veterans do with this job because I get to give back," said Jarmon. "I get to help guys move forward in their life and get some of the things that they need out of life. I know how it is.

"There are a lot of guys who have been through this program and they are very successful. They'll come in with their families and you'll see them with their kids. That's the pay off."

Going through treatment with other Veterans, and with a team of specialists who are trained to treat Veterans, helps patients achieve success in the STAR program.

"The STAR program isn't about giving Veterans something they didn't have before, it's about reconnecting Veterans with who they are," said Jarmon.

Veterans interested in the STAR program at Charleston VAMC can call (843) 577-5011, ext. 5541

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*Veterans*
ADDICTION

# Genetic Risk of Alcohol-related Cirrhosis Uncovered

By Tristan Horrom, writer and editor for VA's Office of Research and Development

In the largest genetic study to date on alcohol-related cirrhosis, researchers found a new area on the human genome linked to protection from liver damage. People with specific variants of the identified gene are less likely to develop cirrhosis from heavy drinking. The large international study, co-led by Dr. Timothy Morgan of the VA Long Beach Healthcare System, also confirmed several other gene variants thought to be connected to cirrhosis risk.

The results could lead to health benefits for Veterans, according to Morgan. First, he explains, "We may be able to better identify patients who are more likely to develop alcoholic cirrhosis if they continue to drink alcohol regularly based on their genetics. VA and the Veteran might benefit from extra efforts to get such patients to stop drinking."

Second, the results could help researchers better understand how alcohol might injure the liver. Despite decades of research, says Morgan, scientists still aren't sure exactly how alcohol causes liver damage.

The results appeared in the Aug. 27, 2020, issue of the journal *Hepatology*.

## Cirrhosis often leads to liver failure

Cirrhosis refers to scarring of the liver. It often leads to liver failure. Chronic alcohol use is the leading cause of cirrhosis in the Western world. Despite this connection, only a minority of heavy drinkers develop cirrhosis. An estimated 10% to 15% of heavy drinkers progress to cirrhosis after decades of heavy alcohol use.

Scientists have speculated that genetic factors influence whether alcohol use will lead to cirrhosis. To investigate this link, the researchers performed a genome-wide association study on more than 1,000 people with alcohol-related cirrhosis and over 600 heavy drinkers without liver disease. A genome-wide association study involves comparing the entire DNA sequences of many people to look for genetic similarities and trends.

The researchers then performed a meta-analysis, comparing their results to those from other biobanks and genome-wide association studies, with data on more than 9,000 people in all. Combining their initial findings with data from other studies increased the researchers' ability to find genetic similarities by including more patients, explains Morgan.

## Researchers identify gene locations related to cirrhosis risk

The study revealed a previously unknown location on the genome (FAF2) associated with cirrhosis risk. People who had specific gene variants at this location were less likely to develop alcohol-related cirrhosis, even after years of heavy drinking.

The researchers also identified two other gene locations related to cirrhosis risk. Gene variants at the location PNPLA3 were linked to a higher risk of cirrhosis. Variants at HSD17B13 were linked to lower risk. The study confirms the link between these two gene locations and cirrhosis, which had been identified by other studies.

The researchers were able to identify FAF2's connection to cirrhosis after accounting for the effects of PNPLA3 and HSD17B13 in the analysis. The analysis also identified two other previously known genome locations (TM6SF2 and SerpinA1) that interact with cirrhosis risk.

## Cirrhosis risk may be linked to lipids in liver cells

FAF2 is a gene involved in the metabolization of triglycerides, a type of lipid (fat). Several other genes linked to cirrhosis risk, including PNPLA3 and HSD17B13, also interact with fats. This could help explain how alcohol injures the liver.

According to Morgan, the finding suggests that lipids may be involved in the biological development of alcohol-related cirrhosis.

"Recent genetic studies suggest that the 'lipid droplet' in the hepatocyte (liver cell) may be important in the risk of developing alcohol-induced liver injury," Morgan explains. "Importantly, FAF2, the gene we found was associated with risk of developing alcoholic cirrhosis, codes for a protein that is found on the surface of the lipid droplet. Thus, these findings lend more support to the idea that the lipid droplet is involved in alcohol-related liver injury."

The National Institutes of Health's Institute of Alcohol Abuse and Alcoholism funded the study. It included researchers from several countries and data from GenomALC, a multinational cirrhosis study; NIH's Laboratory for Neurogenetics; and the UK Biobank.

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*Veterans*
CARDIOLOGY

# VA Encourages Women Veterans to Take Control of their Heart Health

## Number of younger women having heart attacks increasing

Heart disease — which includes coronary artery disease and heart attack — took the lives of almost 300,000 women in 2017. In fact, the disease affects women of all ages and heart attacks are on the rise for younger women.

Fortunately, nearly 80 percent of cardiac events may be prevented by lifestyle changes and education. During Heart Month this February, VA is partnering with the American Heart Association (AHA) to equip women Veterans with the information, tools and resources they need to reduce their risk of the disease.

The symptoms of a heart attack can differ in women versus men. Like men, the most common heart attack symptom for women is chest pain or discomfort. However, women are more likely than men to experience other heart attack signs, such as:

- Shortness of breath
- Pain or discomfort in one or both arms
- Nausea or vomiting
- Back or jaw pain
- Dizziness or fainting
- Breaking out in a cold sweat

### Regular checkups are crucial

Because disease symptoms vary — and because some women don't experience any symptoms at all — it's crucial to have regular checkups to ensure warning signs are caught. Your provider can identify risk factors before the disease strikes and make recommendations to help you lower your future risk.

Beyond keeping up with provider appointments, you can make healthy lifestyle changes, such as regular exercise, healthy eating, and managing your blood pressure.

- To prevent heart disease, experts recommend:
- Eating a variety of healthy foods
- Doing moderate-intensity aerobic activity
- Brisk walking or biking (slower than 10 mph) at least 150 minutes a week

*Photo courtesy of the VHA*

- Knowing your numbers (blood pressure, cholesterol, blood sugar, and BMI)
- VA offers a variety of resources to help women Veterans keep their hearts, minds and bodies healthy:
- Join thousands of other Veterans who have successfully used VA's MOVE! Program to jumpstart a more active lifestyle
- Learn about effective blood pressure management strategies on VA's website
- Take advantage of VA's medical nutrition therapy
- Schedule an appointment today

There are simple steps you can take to manage your heart health. Schedule an appointment with your provider today to discuss a plan that works for you.

Do you have a personal experience with heart disease that you'd like to share with other women Veterans? If so, VA and AHA want to hear from you. Interested individuals should prepare a written submission no longer than 500 words describing their experiences as a survivor or caregiver.

AHA staff will feature selected participants in a "Volunteer Spotlight" on the "Go Red for Women" website and in the AHA e-newsletter. Contact a Women Veteran Program Manager at your local VA to learn how to nominate a woman Veteran. The deadline to submit nominations is February 26, 2020.

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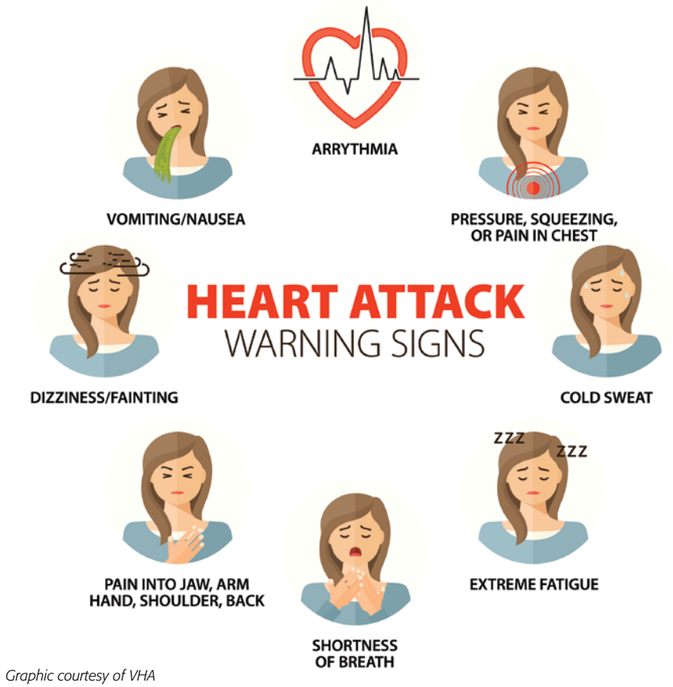
CARDIOLOGY

# Women Veterans Health Care: February is American Heart Month

VA and AHA want you to be aware of five important heart health numbers because they help providers determine your risk for developing cardiovascular disease:

- Total Cholesterol
- HDL (good) Cholesterol
- Blood Pressure
- Blood Sugar
- Body Mass Index (BMI)

The symptoms of heart attack can be different in women versus men and are often misunderstood — even by some physicians. Heart attack signs for women can be subtle and sometimes confusing.




*Graphic courtesy of VHA*

Like men, the most common heart attack symptom for women is chest pain or discomfort. However, women may also experience other heart attack symptoms such as those depicted below.

Know the signs and symptoms of a heart attack and call 9-1-1 to seek immediate medical attention if you experience them. Fewer women than men survive their first heart attack. Getting help quickly can help you survive and make a full recovery, but every 30 minutes you wait to get help can take one year off your life.

### Know Your Risks

According to a recent American Heart Association survey, only one in ten women named heart disease as the greatest threat to a woman's health, while six in ten pointed to breast cancer. Additionally, research shows heart attacks are on the rise in younger women, while at the same time our youngest and most diverse generations of women — Gen Z and Millennials — are less likely to be aware of their greatest health threat.

This lack of awareness has consequences, such as misunderstanding symptoms or delaying seeking treatment. Although more women die from heart disease than men each year, related risk factors* are often missed.

There are some uncontrollable factors that can increase the risk of heart disease in women, such as age, gender, race, and family history. Other risk factors include:

- Preeclampsia
- Diabetes during pregnancy (gestational diabetes)
- Tobacco use
- High blood pressure/hypertension
- High cholesterol or triglyceride levels
- Obesity
- Diabetes
- Lack of physical activity
- Stress
- Illicit drug use
- An autoimmune condition such as rheumatoid arthritis or lupus

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CARDIOLOGY

# Telehealth Pilot Program Provides At-home Care

## Veteran monitored at home after cardiac surgery

By Connected Care Communications

Daniel Steele grew up feeling a lot like his last name: strong and almost indestructible. After all, that's how they raise football and baseball athletes in the small town of Faulkton, South Dakota.

His 27-year career in the Air Force only solidified that feeling. "I felt pretty much immortal as a young man," said Steele (pictured above at home). "It was a sign of weakness growing up to seek any type of medical attention."

Veteran Daniel Steele communicates via telehealth. *Photo courtesy of the VA*

It took two heart attacks and a quadruple bypass surgery this summer to change the 54-year-old's mind. "It certainly woke me up to the idea of mortality," he said. "And for the first time, I felt at risk. I knew that I needed to take precautions but also receive care for my heart condition."

That's when Steele was introduced to telehealth by Kimberly Braswell, his cardiology nurse practitioner at James A. Haley Veterans' Hospital (JAHVH) in Tampa, Florida.

### Monitored at home for almost all post-surgical care

Braswell, along with physician assistant Brenda Hoy and registered nurse Nakeeta Moore, lead a new pilot program that enables Steele to remain home for almost all his post-surgical care and monitoring.

The cardiology pilot program issues Veterans VA equipment such as Apple iPads, blood pressure monitors, scales, pulse oximeters, thermometers and stethoscopes. The equipment enables Veterans to send vital signs to their VA care team from anywhere in the country.

"The technology is impressive and it all runs off Bluetooth," said Braswell. "As a provider, I can see their heart rate, read their blood oxygen levels, see the heart rhythm, hear the heart and lung sounds and get their temperature during a video appointment. These devices are patient-friendly and are saving Veterans a trip to the nearest VA facility."

Innovation is nothing new for Braswell and her team at JAHVH. The hospital is one of four VA Connected Health Implementation Centers of Excellence.

### Continuous virtual care eases many concerns

In 2019, the JAHVH cardiology team initiated the Veteran Engagement Through Electronic Resources and Notifications Study (VETERANS). It's an Apple Watch pilot program that enabled Veterans to conduct electrocardiograms from anywhere and share the results with their VA care team.

"The ability to provide continuous care to our Veterans has always been our mission," Braswell said. "But this current pilot program comes at a time when there are so many limitations and concerns and a reluctance to come into the hospital. This type of virtual care eases many of those concerns and reserves in-person appointments for the Veterans who need them."

Cardiology nurse practitioner Kimberly Braswell. *Photo courtesy of the VA*

Steele was grateful for the opportunity to use telehealth. He said he would recommend this cardiology pilot program to anyone, regardless of their comfort level with technology. "What they've done is outstanding," said Steele.

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*Veterans*
CARDIOLOGY

# VHA IE Trailblazers: Dr. Arash Harzand is Bringing the Hospital to Veterans' Homes

## Senior Innovation Fellow is a trailblazer for in-home telecare for Veterans

By Matthew Razak, Atlas Research

Dr. Harzand's Digital Cardiology Program at the Atlanta VA Health Care System (HCS) aggressively focuses on integrating Veteran-facing technologies — including video-to-home, wearable devices, and remote monitoring — into new-care pathways for heart disease that are expanding Veteran access to cardiology services.

The VHA IE Fellowship Program builds workforce capacity through the development of emerging and senior leaders to become innovation agents capable of championing solutions that will improve health care for Veterans. As a Senior Innovation Fellow, Harzand's groundbreaking work in Digital Cardiology is already mature and ready to scale. The VHA IE Fellowship Program will give him the time and support to enable the expansion of telecardiology services through widespread implementation — and clinical integration — of virtual cardiac care. The work will focus on Veteran-facing technologies and the construction of a centralized pathway to identify and evaluate virtual cardiac solutions in partnership with the VA Office of Research and Development.

Veterans have a disproportionately high burden of cardiovascular disease (CVD) compared to non-Veterans, meaning a transition to operating as a "virtual first" service was vital to the Cardiology Department's ability to maintain access for the large number of Veterans with heart disease at Atlanta VA HCS. Despite VA's position as an early telehealth adopter, the majority of services were for primary care, not specialized services. Undeterred by these challenges, and the need for quick adoption due to COVID-19, Dr. Harzand was able to develop a Virtual Cardiac Rehabilitation Program and expand that work into a comprehensive digital cardiology service line in Atlanta.

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ENDOCRINOLOGY

# STEP UP to Avert Amputation in Diabetes

## Program aims to help Veterans with diabetes fend off foot ulcers

By Claudie Benjamin, Public Affairs Officer at the VA New York Harbor Healthcare System, and Mitch Mirkin, senior writer and editor with the VA Office of Research and Development

Researchers at the VA New York Harbor Healthcare System are making steady progress on a four-year, $1.1 million award from the VA Rehabilitation Research and Development Service to find a way to prevent the recurrence of diabetic foot ulcers in Veterans who had a previous foot ulcer that healed. The project, known as "STEP UP to Avert Amputation in Diabetes," is now coming to its completion.

At VANYHHS, (and nationwide) approximately 25 percent of patients have diabetes and at least 80 percent of the non-traumatic amputations at the Harbor are caused by the complications of recurrent diabetic foot ulcers. "This is a huge problem," says Sundar Natarajan, MD, MSc, who is leading this trial.

Many Veterans with diabetes have neuropathy related to their illness. Dr. Natarajan explains that neuropathy is a condition which causes patients to lose feeling in their toes or other parts of their feet and disordered circulation. Diabetes causes slower healing and a greater chance of infections. Therefore, minor injuries can lead to skin breakdown, ulcer formation and subsequent infection without the patient noticing or treating the injury for a long time. Once the infection has spread, the foot or part of the foot may have to be amputated.

This outcome is particularly difficult since the problem usually occurs in older patients who also may have other complications of diabetes such as kidney disease, heart disease or other serious, debilitating health problems. Understanding this,

A DFU can very easily lead to an amputation or even death for a diabetic Veteran. The most at-risk Veterans face a 5-year mortality rate of 43% after developing their first DFU. With 25 percent of Veterans suffering from diabetes, DFUs are a major concern for VA. Last year, VA treated 75,000 DFUs, which accounted for more than 80% of non-traumatic amputations in VA, resulting in a cost of more than $3.2 billion

Health science specialist Madison McCarthy instructs Vietnam-era Air Force Veteran Charles William Bell on the use of the long-handled thermometer. Bell, who uses a walker, said, "It's a marvelous idea." *Photo by Claudie Benjamin*

VA has created special foot clinics and provides supplies to encourage better self-care, such as mirrors for Veterans to examine their feet and cushioned shoe inserts or special shoes to minimize pressure on foot areas at risk. However, the biggest challenge is to get patients to follow self-care practices that are proven to reduce the risk of recurrent diabetic foot ulcers.

Harbor's STEP UP team is encouraging patients to be more aggressive in taking charge of their own preventive healthcare. This new Harbor program is focused on motivating patients to adhere to recommended self-care practices and to monitor the temperature of foot soles using a special foot thermometer. In order to establish the effectiveness of this new approach, the STEP UP team are conducting a randomized clinical trial.

"We've developed a new approach in this randomized clinical trial," says Dr. Natarajan referring to the trial which involves a team of ten staff members. "The first part is getting people to take better care of their feet. The second part involves monitoring pre-ulcer foot health with a foot thermometer. These are in the context of typical diabetes care such as eating healthy, staying physically active, and taking medications as prescribed."

The thermometer is held by the patient at six different parts of the sole and temperatures are recorded by the patient. Dr. Natarajan says that if a patient has healthy feet, both feet will generate the same temperature level. However, when an ulcer is about to develop, the temperature of an area on the affected foot may be higher due to inflammation.

If there is a discrepancy between the two feet, the research counselors are consulted. In most situations, resting for 24 hours with the affected foot elevated brings the temperature to a normal level. If not, the patient is referred to a foot specialist for follow-up care which typically involves excluding non-ulcerative conditions and providing off-loading shoes. Foot thermometry offers patients a way to detect and stop ulcers before they develop.

"I used [the thermometer] every morning for 18 months," said Vietnam Veteran Joseph Hammerschmitt, who recently completed his participation in the study." It was very simple. I sat myself on the bed and did one foot and then the other. It was good. I didn't wind up with any foot problems."

In accordance with STEP UP guidelines, Hammerschmitt has also been washing his feet every day and using a mirror to check that his feet are clear of blisters, ulcers or other lesions. Importantly, he continues these preventive activities even today. He even monitors his physical activity using the study pedometer, which he still carries around with him.

### Thermometer checks for impending ulcers

The fact that neuropathic areas at risk for ulceration are associated with increased skin temperature was first noted in leprosy patients. The application of this idea in people with diabetes

Health science specialist Tova Bergsten watches as Army Reserve Vietnam-era Veteran Stephen Fisher demonstrates a special thermometer being used in STEP UP that can help detect early-stage ulcers. *Photo by Claudie Benjamin*

was pioneered by podiatry researcher Dr. David Armstrong, formerly with VA in Chicago.

"We are building on their work to develop and test a stronger intervention and more of a home-based program," says Natarajan. He notes that Armstrong is a collaborator on the current project.

STEP UP is testing a new phone-counseling approach designed to motivate patients to self-monitor their foot temperatures and take better care of their feet overall. Natarajan says he hopes this will "lead to a new strategy to prevent the devastating complications of foot ulcers."

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ENDOCRINOLOGY

# Enjoy Eating Out When You Have Diabetes

## Make restaurants a healthy part of your meal plan

Whether it's dinner from your neighborhood carry out or going to lunch with friends, eating out is a part of everyone's life. Having diabetes can make this tough, but with planning and thoughtful choices, you can enjoy a variety of healthy foods away from home. Use these tips to enjoy eating out while still sticking to your routine of eating healthy for diabetes.

### Plan ahead

While restaurants are in the business of selling food, and not necessarily helping you stick to your diet, many offer healthy food choices and alternatives. You can plan what you want to order ahead of time by looking at menus online. It's also easier to make healthy food choices if you're not starving, so before a party or dinner, enjoy a diabetic-friendly snack. If you are going to a friend's house, ask if you can bring food to share. That way you'll know there are healthy options to eat.

If you have diabetes, it's important to know the number of carbohydrates you should have in each meal. Carbs can raise blood sugar levels more than other nutrients, so it's best to monitor them. Try limiting cheese, bacon bits, croutons, and other add-ons that can increase a meal's calories, fat, and carbohydrates.

### Mind your portions

Many restaurants pack their plates with portions that are often twice the recommended serving size. You can avoid the temptation to overeat by:

- Choosing a half-size or lunch portion.
- Sharing meals with a dining partner.
- Requesting a take-home container to put half your food in before you start to eat your meal.
- Making a meal out of a salad or soup and an appetizer.

When at parties, choose the smallest plate available or a napkin to keep from overeating. A good rule of thumb is to fill half of your plate with vegetables or salad. Then split the other half of your plate between protein and non-starchy carbohydrates. If you have a sweet tooth, fruit is a good choice for dessert. Since you likely don't have a measuring cup or food scale handy, you can estimate serving sizes based on your hands:

- 2 to 3 ounces is about the size of your palm
- ½ cup is about the size of your cupped hand
- 1 cup is about the size of your full fist

### Healthier alternatives

As you decide what foods to add to your meal, consider how they are prepared. Rather than ordering something breaded or fried, ask that your food be:

- Broiled
- Roasted
- Grilled
- Steamed

Don't settle for the side dish that comes with your meal. Instead of fries, choose a side salad with fat-free or low-fat salad dressing, or extra vegetables. You can also control how much fat you eat by requesting butter, sour cream, gravy and sauces on the side. If you choose a sandwich, swap house dressings or creamy sauces for ketchup, mustard, horseradish or fresh tomato slices. Drinking sugar-sweetened soft drinks is an easy way to rack up calories, so instead opt for water or unsweetened ice tea. If you drink alcohol, limit yourself to one serving and choose options with fewer calories and carbs, such as:

- Light beer
- Dry wines
- Mixed drinks made with sugar-free mixers, such as diet soda, diet tonic, club soda or seltzer

### Add it to your food journal

Keeping a food journal is a great way to stay aware of what you eat each day. Diabetic Veterans can track both their meals and vitals with My HealtheVet's Track Health feature. Before your meal, take and enter your blood sugar level. Once you are done eating, record the foods you chose. This will help you — and your doctor — understand your eating habits and create a diabetes meal plan that meets your lifestyle and health needs.

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ENDOCRINOLOGY

# Making Meals Diabetic Friendly

## By the Health Promotion Disease Prevention Committee

Meal planning can be difficult for anyone. However, for those with diet restrictions, planning and cooking dishes that are family favorites and diabetic-friendly can be even more challenging.

Diabetic friendly recipes include lean proteins, reduced carbohydrates, increased non-starchy vegetables and low-fat dairy.

Here are a few simple ways to reduce the carbohydrate content of meals:

- Replace whole grain noodles with zoodles (noodles made from zucchini), or use smaller amounts of whole grain noodles and replace the remaining with more non-starchy vegetables.
- Replace rice with quinoa. Quinoa is a starchy seed that is full of protein. It also helps maintain blood sugars. Rice also can be replaced with finely diced cauliflower.
- Make a cauliflower pizza crust instead of a traditional flour version.
- Switch traditional tortillas with a low carb version like carb balanced or flatout wraps. Another option is to use a smaller sized tortilla.
- Include cauliflower in mashed potatoes to increase your non-starchy vegetable intake and reduce carbohydrates.
- Use Romaine, bib or butter leaf lettuce as a bread for sandwiches or a tortilla replacement
- Replace sugar in recipes with artificial sweeteners. Be sure to adjust quantities of artificial sweeteners when replacing for sugar in baking recipes.
- No-sugar-added does not mean sugar-free! Be sure to always look at the nutrition facts on every label for carbohydrate content.

For delicious, diabetic-friendly recipe ideas, visit the American Diabetes Association at www.diabetes.org

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*Photo courtesy of myhealth.va.gov*

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ENDOCRINOLOGY

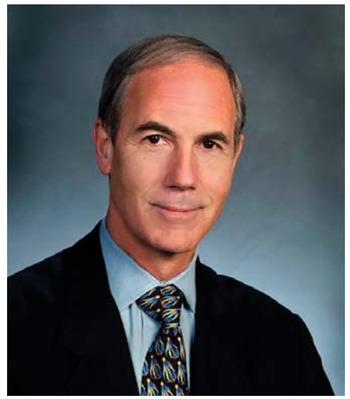
# Artificial Intelligence for Diabetes Management

By Tom Adams, from an interview Medtronic Diabetes Chief Medical Officer
COL (ret) Robert A. Vigersky, MD

One of the major advances that has come about in the last 20 to 30 years are the technological advances in diabetes management. We've also had many advances in oral medication, but it's the technology, particularly the way its used to deliver insulin, that has helped a lot of people with diabetes make management of diabetes easier. Diabetes technology has been on a very rapid trajectory in the last 5 or so years.

This year is the 100th anniversary of the discovery of insulin, and we've come such a long way in managing diabetes. Before the discovery of insulin developing type 1 diabetes was a death sentence. Most people would be dead within a year for sure, so it was a life-saving and Nobel prize-winning discovery that Banting and Best made 100 years ago. Since then we've gone from injecting with big scary looking needles and syringes that had to be boiled and sterilized every time you took an injection, to disposable plastic syringes, to insulin pens. Today we have smart pens which are a new technology that can help people manage their diabetes by recording how much insulin is being given, when it was given, and the correct amount of insulin that should be given. Those reports are available to the patient and also to their healthcare provider, providing substantial help in managing diabetes.

Insulin pumps have also seen significant advancements. While they have been around for 30 to 40 years, it is within the last 5 years that we have been able to pair an insulin pump with a continuous glucose monitor, which means that individuals can see their glucose level every five minutes, and the pump can



COL (ret) Robert A. Vigersky, MD

automatically deliver background insulin based on that reading. Combining that information creates a system we call a hybrid closed-loop system.

This is getting close to an artificial pancreas but we're not quite there. Regardless, today people with diabetes can achieve excellent control of their sugar thereby, decreasing the risk of the dreaded complications of diabetes. We have known for years that the better the blood sugar control, the less likely someone is to have an amputation, go blind, have kidney failure that leads to dialysis or a kidney transplant, or have a heart attack or stroke. Ultimately, better diabetes control means there is a reduced likelihood of dying prematurely. So all these advances over the last 100 years, between the discovery of insulin and where we are now with advanced technologies, has helped people better live longer and better.

We are in a new era and have reached a point where not only are we seeing very good blood sugar control, but we're doing so with less effort. Diabetes is a very demanding and consuming condition, particularly for those with type 1 diabetes and those with type 2 diabetes who take multiple doses of insulin a day. That demand is constant. They have to make literally dozens if not hundreds of decision every day about what they are going to eat, how much insulin they should take and what happens if they exercise, drink alcohol, forget to eat, or are under extreme stress, since all these things can affect their blood sugar. The goal here, and we're on our way to that goal, is to minimize all that decision making and let the systems that we've developed actually do the work for the person and lessen the burden.

In 2021, we're at the point in diabetes management where we are introducing technologies that use artificial intelligence and machine learning to help people with diabetes forget about their diabetes and live their lives the way they really want to, instead of being tethered to a condition they have to think about all the time. This is a very exciting time at Medtronic, as we are really on the cutting edge of developing some of these new technologies that will make a meaningful difference in a person's quality of life.

Matching the absorption of food and the effect of insulin has been an elusive goal. Looking ahead, someone's Apple watch or device can measure your gestures so we can tell when you are starting to eat and have the pump begin to deliver insulin as the food is being absorbed, rather than after the fact. That is a technology in development now. In addition, using phone-based GPS can tell the pump system where you are so, if you're going to McDonald's and you do that regularly on Sunday and usually order the same thing, the system can prompt you with suggestions about the healthiest choices.

There's a lot of amazing technologies in development that will really help individuals with diabetes until we find a cure. Whether you are a Veteran, on Active Duty or a military healthcare beneficiary, these systems are available to you with a prescription from your healthcare provider. I've been affiliated with Walter Reed for over 40 years, and know that in the Military Healthcare System as well as in VA hospitals, there are Endocrinologists and other diabetes experts that understand the technology and know how to manage people with them.

I think it is fair to say that the DoD and VA have been at the cutting edge of helping people with diabetes for years. In fact, during this year's American Diabetes Association annual meeting there was a presentation by someone from a consortium that combines VA and DoD clinicians, who developed an online virtual diabetes clinic where educational materials and tutorials related to diabetes are available. The diabetes management guidelines that the VA and DoD have created have been in the forefront of helping healthcare providers appropriately screen for and manage diabetes. I am really impressed with the forward-thinking, rigorous approach employed by the DoD and VA around diabetes, not only out of necessity because diabetes is rampant in the Veteran and Military Retiree population, but because it is the right thing to do.

I am a retired Army Medical Corps Colonel as of 6 years ago, having spent 27 years on Active Duty. I started the Diabetes Institute there which provided programs to educate our patients, educate our Endocrinology Fellows and Medical Residents, and provide Nurse Practitioner-delivered diabetes specialty care in primary care clinics scattered throughout the DC area. We also provided a fairly robust research program that was focused on Diabetes technologies.

I am still a Red Cross volunteer at Walter Reed National Military Medical Center. Since I still volunteer there, I can tell you that the Military Healthcare beneficiaries get medical care that is as high-quality as any health system in the United States and around the world. I know that the Veterans Health Administration has similarly taken the lead in providing outstanding diabetes care using their electronic medical record to provide decision support for their healthcare providers so that Veterans get the appropriate care.

I've had a wonderful career with the Military and as a Red Cross volunteer, I still see patients some of whom have been coming to see me at Walter Reed for 20 to 30 years. I know they appreciate having that kind of continuity — a rarity in the Military system. For me, it's wonderful to really get to know my patients as people not just patients.





Armed Forces Medicine 2021

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## INFECTIOUS DISEASES

# VA Researcher Working to Improve HIV Care for Rural Veterans

### Telehealth option connects rural Veterans with HIV specialists

By the VA Office of Media Relations

Dr. Michael Ohl of VA's Iowa City VA Health Care System is creating a model titled Telehealth Collaborative Care to improve the quality of care for Veterans who live far from specialty clinics. Telehealth Collaborative Care uses videoconferencing to connect rural Veterans with human immunodeficiency virus (HIV) with VA specialists.

HIV is a chronic condition that can result in serious outcomes for patients lacking access to quality treatment. The illness attacks the body's immune system and can cause acquired immune deficiency syndrome or AIDS, a potentially life-threatening disease. Approximately 18 percent of the 26,000 Veterans under VA care for HIV live in rural areas. These Veterans have limited access to high-quality, HIV specialty clinics.

"Veterans should have easy access to HIV testing and state-of-the-art HIV care regardless of where they live," said Ohl, an infectious disease specialist. "We know that compared to their urban counterparts, rural Veterans with HIV enter care with more advanced illness, are less likely to receive the latest advances in HIV treatment, and have lower survival rates. We want to change that."

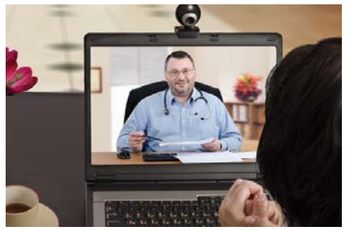

*Photo courtesy of the VA*

Michael Ohl, MD, MSPH. *Photo courtesy of the VA*

Ohl's study explores rural Veterans' interest in using video telehealth at closeby, VA community-based outpatient clinics, (CBOCs) to maintain their ongoing care. CBOCs serve as satellite clinics for large VA medical centers. Veterans can telecommunicate, via video at CBOCs, with an HIV specialist at the larger facility.

HIV pharmacists, psychologists, and nurse-care managers may also be included in videoconferences. A nurse onsite with the Veteran at the outpatient clinic can administer treatment if prescribed by the specialist. Veterans can also meet with their primary care physician onsite. The primary care clinic and specialty care clinic can then communicate to determine how best to co-manage the Veteran's care.

The coordinated process lifts a major travel burden off rural Veterans. In 2010, rural Veterans with HIV were an average of 86 minutes by car from the closest infectious disease clinic versus 23 minutes on average for urban Veterans. Rural Veterans were also less likely than their urban counterparts to use specialty care.

The Telehealth Collaborative Care study, which involves approximately 800 Veterans, is focusing on rural areas near San Antonio, Houston, Dallas and Atlanta, each of which has a VA hospital with an HIV specialty clinic. Veterans with HIV who live closer to a primary care clinic or CBOC than to a specialty clinic and who have at least a 90-minute drive to one of these cities are being offered the telehealth option.

> HIV is a chronic condition that can result in serious outcomes for patients lacking access to quality treatment.

Through interviews with the Veterans, Ohl and his team are finding that most of those offered telehealth are choosing to take advantage of the option. VA offers close to 50 telehealth specialties. During fiscal year 2016, more than 700,000 Veterans completed approximately 2 million telehealth appointments.

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## INFECTIOUS DISEASES

# VA Recommends All Veterans Be Tested at Least Once for HIV

### Even those Veterans who do not think that they have risk factors

By Elizabeth Maguire, MSW, VA Communications Lead for the HIV, Hepatitis, and Related Conditions Programs

June 27th is National HIV testing Day and the Department of Health and Human Services (HHS) has announced the release of the HIV National Strategic Plan "to End the Epidemic for the United States, 2021–2025".

As the single largest provider of HIV care in the U.S., VA has a critical role in this effort. VA provides care to nearly 31,000 Veterans with HIV across its health care system and has a well-established National HIV Program. For all Veterans in care, VA will do its part to end HIV in the US by:

- Offering HIV testing at least once to every Veteran and more frequently to those at risk;
- Rapidly linking those with newly diagnosed HIV to effective treatment;
- Expanding timely access to high-quality HIV care and prevention across VA's integrated network, using face-to-face encounters and telehealth;
- Offering PrEP, a medication that can prevent HIV, when clinically appropriate.

The goal of this plan is to completely end HIV in the United States by 2030. "To realize this ambitious but achievable target, we will support HHS is the following goals", said Former Acting Under Secretary for Health, VHA, Dr. Richard Stone.

- Diagnose all people with HIV as early as possible after infection
- Treat them as soon as possible
- Protect people at risk for HIV
- Detect and rapidly halt outbreaks
- Deploy an HIV Health Force to hard-hit areas of the country

"VA will expand access to high quality HIV care and prevention across our integrated network", said Dr. Stone, "Using both face to face and telehealth encounters. We will rapidly connect those with newly diagnosed HIV to effective treatment. And we will offer PrEP, a medication that can prevent HIV when clinically appropriate. Together, we can ensure that VA is a place where any Veteran, with or at risk for HIV, can access the best care safely, and free from stigma and discrimination. Each of us has a role in ensuring VA leads the way in ending the HIV epidemic, one Veteran at a time."

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Former Acting Under Secretary for Health, VHA, Dr. Richard Stone, speaking with a Veteran. *Photo courtesy of the VA*

*Veterans*
INFECTIOUS DISEASES

# Supporting Long-Term Survivors of HIV

By Jeff Taylor, Executive Director, HIV+Aging Research Project-Palm Springs

It's been nearly 35 years since I was diagnosed with HIV. I was infected in 1981 or 1982 before we knew anything about HIV, or how to protect ourselves. When I tested HIV positive in 1988, I was told I had less than two years to live and to "go home and start making arrangements to die." I was 26 at the time and wasn't expected to live to be 30, let alone 60.

Today, I advocate for improving the quality of life for older Americans with HIV, who like me have been living with HIV for decades into an old age we never expected to reach. As we grow older with HIV, many of us face new challenges, including both physical and mental health struggles. Now, more than ever, we need help.

For many long-term survivors, HIV is the least of our challenges. Because the virus itself is mostly controlled, many of us are instead faced with managing the related health effects of decades of living with HIV and its treatments, such as an increased risk of an early cancer diagnosis.

Despite these challenges, there is hope for those with HIV, and many ways that health care providers, community organizations, and individuals can offer support.

Health care providers need to adapt a geriatric model to address the complex needs of older Americans with HIV by extending office visits to allow for managing multiple chronic conditions and health challenges. Providers can also adapt cancer prevention strategies by providing earlier cancer screenings, especially for anal, oral, and head and neck cancers that disproportionately affect older Americans with HIV.

Community organizations need funding to create and fund peer-support programs that empower those with HIV to connect with one another for support, share their challenges, and provide the collective benefits that volunteering has for all those involved. By making long-term survivors part of the solution, they can play a role in outreach and community support of each other — hearkening back to the Denver Principles of "nothing about us without us."

Community organizations can also collaborate with social workers, to better address their needs and create a support system that offers the types of services that can make the biggest impact on the daily lives of older Americans with HIV. Ideally, HIV service providers need to co-locate clinical and social support services under one roof so that older people with HIV can have seamless care coordination, and don't fall through the cracks.

With many current HIV programs focused on prevention and treatment, many older Americans with HIV feel overlooked, which is demoralizing and further compounds their feelings of loneliness and depression. Government agencies should ensure that outreach messages, materials, and campaigns include older Americans with HIV and recognize the role they play in our work if we are to achieve our goal of ending the HIV epidemic.

I and my HHS colleagues want everyone with HIV to know that they are supported, and we want policies, programs, and outreach from health care providers, community organizations, and government agencies that reinforce that message. Those with HIV coping with loneliness or with substance abuse need access to non-judgmental, culturally appropriate, treatment-on-demand using harm reduction models.

Jeff Taylor (right) and Rob Newells, amfAR Institute for HIV Cure Research Community Advisory Board Co-Chairs, at amfAR's 2017 World AIDS Day HIV Cure Summit, November 28, San Francisco. *Photo courtesy of amfAR*

Even with all the successes in HIV over the years, there are more than one million people with HIV in the United States today, the majority of whom are over 50, and we need help if we are to thrive as we live into an old age we never anticipated.

With the 40th anniversary of the first CDC Morbidity and Mortality Weekly Report (MMWR) article identifying what would come to be known as HIV and AIDS, we can celebrate our successes, but we also need to take stock of the challenges and work that remain.

Thanks to decades of work by the HIV research community and trial participants — lessons learned from HIV clinical trials helped the medical community quickly develop a safe and effective COVID-19 vaccination. However, many long-term HIV survivors still need our support.

Let us all work together to ensure that long-term HIV survivors feel a sense of belonging, community, and support. Let us be an ally in the journey that lies ahead for those aging with HIV.

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NEPHROLOGY

# Favorable Outcomes for Veterans who Receive Kidney Transplant Care in VA

By Dr. Steven Weisbord, staff nephrologist and core investigator at the
Center for Health Equity Research and Promotion at the VA Pittsburgh Healthcare System

Many Veterans suffer from chronic kidney disease. When chronic kidney disease reaches its end stage, treatment with dialysis or kidney transplantation becomes necessary. Compared with dialysis, kidney transplantation offers better overall quality of life and life expectancy.

As a result, many Veterans with end-stage kidney disease seek to receive a kidney transplant.

A recent study by our team at the VA Pittsburgh Healthcare System found favorable outcomes for Veterans who receive their post-transplant care in VA versus through Medicare or a combination of VA and Medicare.

### Kidney transplants for VA patients

VA established a transplant program in the 1960s that has provided comprehensive organ transplant care to thousands of Veterans. Veterans without non-VA insurance have traditionally been required to travel to regional VA transplant centers to be evaluated for and undergo transplantation.

Recent federal legislation, most notably the Maintaining Internal Systems and Strengthening Integrated Outside Networks (MISSION) Act, expanded Veterans' access to care in the community, including for organ transplantation. As a result, many Veterans can now choose whether they receive transplant care in a VA or a non-VA community transplant center.

In light of the large number of Veterans eligible for community transplant care through the MISSION Act, it is essential that VA understand where Veterans receive their transplant care. This can help determine the resources needed to care for this patient population.

It is also important to understand whether the quality of transplant care differs based on where Veterans receive care.

### The study findings

To explore these issues, the VA National Surgery Office and Quality Enhancement Research Initiative (QUERI) partnered with investigators from the VA Center for Health Equity Research and Promotion (CHERP) to explore the impact of community care on transplant-related processes of care and health outcomes.

This study, co-led by myself and fellow CHERP Investigator Dr. Walid Gellad, identified Veterans who underwent kidney transplantation between 2008 and 2016 and were enrolled in both VA and Medicare at the time of their transplant. Consequently, these Veterans had the choice of receiving kidney transplant care at a VA transplant center, a non-VA transplant center using Medicare, or both.

Based on this cohort of Veterans, we sought to answer two key questions:

- Where do Veterans with the choice to receive kidney transplant care within and/or outside VA opt to receive such care?
- Does their choice affect longer-term mortality?

Overall, more than 6,000 Veterans who underwent kidney transplantation between 2008 and 2016 and were dually enrolled in VA and Medicare at the time of the surgery were identified. Among these patients, 16% underwent kidney transplantation within VA and 84% received a kidney outside VA.

In the year following transplantation, 12% received their post-transplant care in VA only, 34% received their post-transplant care outside VA only using Medicare, and 54% received their post-transplant care through both VA and Medicare.

We found that Veterans who received Medicare-only post-transplant care had a higher five-year mortality rate compared with VA-only patients (20% vs. 11%), as did patients who received post-transplant care both within and outside VA (16% vs. 11%).

### Implications in the MISSION Act era

This study, which appeared in the Clinical Journal of the American Society of Nephrology, has important implications for Veterans and VA transplantation in the era of the MISSION Act.

First, while most Veterans with the choice to undergo kidney transplantation within or outside VA opt to undergo this surgery in the community, a large proportion choose to use VA, in part or in full, for their post-transplant care.

This suggests that while patterns of transplant care among Veterans may change with the MISSION Act, there will continue to be significant use of VA for key post-transplant care.

Second and most importantly, receipt of all post-transplant care within VA is associated with improved long-term survival compared with receipt of post-transplant care exclusively in the community, or both within and outside VA.

### Potential explanation for the findings

One potential explanation for this observation has to do with possible differences in the quality of care provided by VA and community transplant centers. As a nationwide integrated health care system, VA facilitates timely communication and seamless collaboration between providers at transplant centers and smaller facilities and clinics.

Furthermore, VA's universal electronic medical record facilitates review of laboratory test results and medications prescriptions at any VA facility. These advantages may support better transplant care coordination within a single health care system and lead to more favorable outcomes.

Our team has received additional funding from the VA Health Services Research and Development Service to extend this research. Specifically, we will examine patterns of both kidney and liver transplant care before and after the implementation of the MISSION Act and assess the reasons underlying where Veterans choose to receive kidney and liver transplant care.
We will also broaden the examination of how and why the site of transplant care affects other key outcomes, including time spent on the transplant wait-list, receipt of an organ, and organ failure.

Regardless of the underlying reasons for the more favorable outcomes observed among Veterans who received all of their post-kidney transplant care in VA only, the findings of this research so far should help Veterans and VA providers make evidence-based decisions about where to receive transplant care in the MISSION Act era.

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# Nutrition Essential for Managing Kidney Disease

By Mikala Jamison, senior writer for DCG Communications

Many VA partnerships and initiatives focus year-round on providing Veterans information and resources to help them access nutritious food that suits their needs and lifestyles. One example is the VA partnership with American Kidney Fund (AKF), which was established in November 2020.

This collaboration adds to existing VA programs and services that support Veterans through early identification of kidney disease and referral for appropriate treatment. VA's eKidney Clinic is one such resource. There, Veterans can learn about proper kidney nutrition. They'll also learn how and why to pay attention to potassium, protein and sodium, and much more.

According to AKF, controlling high blood pressure and diabetes through a diet low in salt and fat may help prevent kidney disease from getting worse. A kidney-friendly diet limits certain foods to prevent the minerals in those foods from building up in your body.

### Kidney Kitchen recipes

AKF has on its website a user-friendly breakdown of information about a kidney-friendly diet as well as many other educational resources. Another AKF resource is its KidneyKitchen, featuring nutritious recipes, shopping guides and tips for cooking or dining out while staying kidney friendly.

Kidney-friendly diets and nutrition must take cultural backgrounds into consideration as well. AKF explains that African Americans are more at risk for kidney failure than any other population and diabetes is the number-one cause of kidney failure.

About one in nine African American adults has diabetes compared to about one in thirteen white adults. Hispanic and Native American people are also at higher risk for diabetes.

AKF and VA provide resources and support for anyone with a kidney disease diagnosis. Viewers can find a free "Know Your Kidneys" doctor discussion guide on AKF's website.

### Help Veterans understand if they are at risk

VA's National Center for Healthcare Advancement and Partnerships (HAP) manages the VA-AKF partnership.

Georgeanna Bady, a health systems specialist for HAP, said the education and tools this partnership makes available to Veterans will help bring many people — no matter their background — the resources they need to manage kidney disease.

"This partnership aims to help people understand if they are at an increased risk for kidney disease," she said. "And how they might prevent or manage the disease to the best of their ability given their unique lifestyle circumstances. Food and cooking are deeply personal and culturally-specific. We must consider the diversity of the Veterans who are diagnosed with kidney disease and be inclusive of their needs. Together with AKF, VA knows we'll be able to do that."

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NEUROLOGY

# Memphis VA Medical Center Telestroke Simulated Exercise Program

By Mark Weber/Daily Memphian

For about 35 tense moments early Thursday, an emergency room team at the Memphis VA Medical Center acted out their roles in a drama that happens over and over here.

A patient comes into the hospital with signs of a stroke. The initial assessments — triage, CT scan and blood work — confirm the likelihood.

By this time, a neurologist is on the case — if there is one.

In VA hospitals around the nation, including here, neurologists are not always in the building. If they have to come from home at night or rush over from another hospital, the minutes are laced with urgency.

So, it surprised no one in the simulated drama unfolding Thursday that every step was timed, including the call to the VA's national Telestroke nurse at 8:32 am.

Two minutes later, Dr. Deborah Kerrigan, a neurologist at Vanderbilt Health in Nashville, had been alerted. By 8:44 am, she was in the room, via iPad robot, asking the camera to be moved so she could see the patient's full body.

"Let's see if she will follow your finger and look at you," Kerrigan said.

Dr. Amos Raymond, VA emergency room physician, moved his fingers in front of the patient's eyes.

Nothing.

"Can you smile for me," Kerrigan asked the patient, played by VA hospital nurse educator, Joy Barrera.

Blank face.

"I'm not seeing a significant facial droop, are you?" Kerrigan said.

Through a 42-step checklist, the medical team worked through the process of determining whether clot-buster medication was needed or if the patient should be transferred to Methodist University for a surgical procedure to remove it.

By 8:48 am, Kerrigan and Raymond determined the drug alteplase was necessary. At 8:51 am, it had been reconstituted and was flowing from the IV stand next to Barrera's bed.

Dr. Amos Raymond, an emergency room physician at Memphis VA Medical Center, evaluates stroke patient (Joy Barrera) during a Telestroke simulated exercise. *Photo by Mark Weber/Daily Memphian*

Dr. Deborah Kerrigan, a neurologist at Vanderbilt Health in Nashville, works remotely via iPad robot with Memphis VA Medical Center staff members as they treat a stroke patient during a Telestroke simulated exercise. *Photo by Mark Weber/Daily Memphian*



Beverly Massey (right), the simulation director at Memphis VA Medical Center, leads hospital staff members in a Telestroke simulated exercise. *Photo by Mark Weber/Daily Memphian*

The only neurologist in the room was three hours away in Nashville.

"Looks like we are golden," Kerrigan said. "You are going to get much better, ma'am.

"I think that's a wrap," she said to the team around the bed, visibly relieved.

Sometime in June, the Memphis VA is expected to be hospital No. 48 out of 152 VA medical centers in the Veterans Administration's national Telestroke program.

Through it, VA emergency room and ICU staff are trained to make the assessments, run the qualifying diagnostics and get connected to a network of neurologists. Someone is always on call. "The advantage is it allows us to treat patients faster at night and on weekends when a neurologist is not in the hospital," said Dr. John Flaherty, chief of emergency medicine at Memphis' VA hospital. "One of the major issues is we have a narrow window in which to administer the medicine.

"Basically, the doctor shows up on iPad."

Every year, about 6,000 veterans are treated for strokes in the VA network, fanning in from every conceivable locale in the nation, many without easy access to neurology.

The Veterans Administration started the Telestroke program in 2017, rolling it out first in rural areas. Since then, it has been used in more than 4,000 consults. In more than 300 of the cases, alteplase was necessary, says Gina Jackson, VA spokesperson in Washington.

Flaherty, once a physician for the Chicago Cubs, has been pushing for the Telestroke connection in Memphis, where the stroke rate is 37% higher than the national average.

On Wednesday, May 26, for instance, the Memphis VA Medical Center had three Code Strokes in its emergency room.

Alteplase is the only FDA-approved medical therapy for acute stroke. While it can work miracles — dissolving the clot and allowing blood to flow back into the brain — Flaherty will be the first to say it can also be lethal.

He's seen it happen."We need to make sure we have all the appropriate testing, all the imaging, and make sure there is no bleeding in the brain or intestine."

The medication, derived from an enzyme from bats, dissolves all the clots in the body. It's dangerous for people who have bleeding ulcers, for instance. And for obvious reasons, Flaherty says, it is never used after surgery.

Memphis VA Medical Center staff members lift a stroke patient, played by VA hospital nurse educator, Joy Barrera, onto a CT scan machine during a Telestroke simulated exercise. *Photo by Mark Weber/Daily Memphian*

Treatment for strokes must be administered in four hours.

The goal Thursday was to cover everything on the checklist — gather patient vitals, including when she last had normal function, confirm the last four numbers of her Social Security number, conduct diagnostics, start an IV and alert Telestroke network at the critical juncture.

"It's the different between driving a a car and flying a plane. You have all the checklists for the plane," Flaherty said.

"If you get a flat tire in the air or an engine comes off, it's a much bigger deal. We have to check connection, make sure they hear us, that they can see what is going on, that they can see we are doing the timing."

The bandwidth was fine. There were no glitches or lost connections during the medical consult with Kerrigan.

Minutes later, when the team was virtually debriefing the simulation with the VA's national training team, the laptop battery died. The screen went instantly dark.

"OK, everyone, the debriefing will continue online. You got the link by email," said Beverly Massey, Memphis VA simulation director. "Go to your desk to continue the debriefing."

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ONCOLOGY

# Delivering Precision Oncology to Improve Veteran Care

By Ashleigh Barry, Senior Advisor in the VA Center for Strategic Partnerships

For more than 90 years, VA has been a leader in cancer research and treatment, and continuously worked to improve the lives of Veterans and all Americans. One treatment — Precision Oncology — was once a regional program. Today, it has significantly grown over the past several years and is now used in almost every VA oncology practice nationwide.

Former Acting Under Secretary for Health, VHA, Dr. Richard Stone explained during a virtual conference, hosted by the American Society of Clinical Oncology, that Veterans are particularly vulnerable to certain types of cancer due to their service in various challenging environments around the world. At VA, approximately 50,000 Veterans are diagnosed with cancer each year. Of these, about 15,000 are prostate cancer and 7,700 are lung cancer.

## What is Precision Oncology?

VA's National Precision Oncology Program provides targeted cancer care for Veterans based on their genetic profiles. More than that though, it facilitates access to new therapies through clinical trials. Patients can agree to have their clinical, genetic and imaging data shared with researchers to help advance cancer care. All research samples are coded and contain no personally identifying information.

When Veterans are given a cancer diagnosis, their VA physician may take a small sample of their tumor and send it to qualified laboratories for targeted genomic sequencing.

This process can determine the DNA sequence of genes that are considered important in understanding and treating certain cancers. Sequencing can identify specific cell mutations that cause cancers to grow, allowing the patient to benefit from drugs that are targeted to those mutations, or to potentially take part in clinical trials of new drugs targeted toward those specific mutations. The program provides research, clinical trials and innovative solutions through virtual care.

Army Veteran Roger Lupkes lives in rural Minnesota and benefits from virtual care cancer technologies. The Vietnam Veteran was diagnosed with prostate cancer, lung cancer, and then colon cancer over the last 18 months. Because of the complexity of Lupkes's case, he was matched with Dr. Michael Kelley, VA's National Program Director for Oncology based in Durham, North Carolina.

## Long-Distance Relationship

Lupkes, and his wife Henrietta, make the nearly 100-mile drive from their rural home to the Sioux Falls VA Medical center for appointments. Once there, local VA staff and the Lupkeses link up with Dr. Kelley, who is 1400 miles away, through video equipment for a "telehealth" visit. VA's ability to deliver care through "tele-oncology" sessions opens more options for Veterans like Lupkes and others across the country.

## Partners in Care

The delivery of world class tele-oncology services is made possible in part thanks to VA partners at the Bristol Myers Squibb Foundation. The foundation pledged $4.5M in grant funding, facilitated by the VA Secretary's Center for Strategic Partnerships.

Accessible targeted cancer care will help expand specialized oncology care in a virtual setting. Additionally, it helps cancer care teams provide a positive patient experience during tele-oncology visits.

Army Veteran Roger Lupkes and his wife Henrietta. *Photo courtesy of VHA*

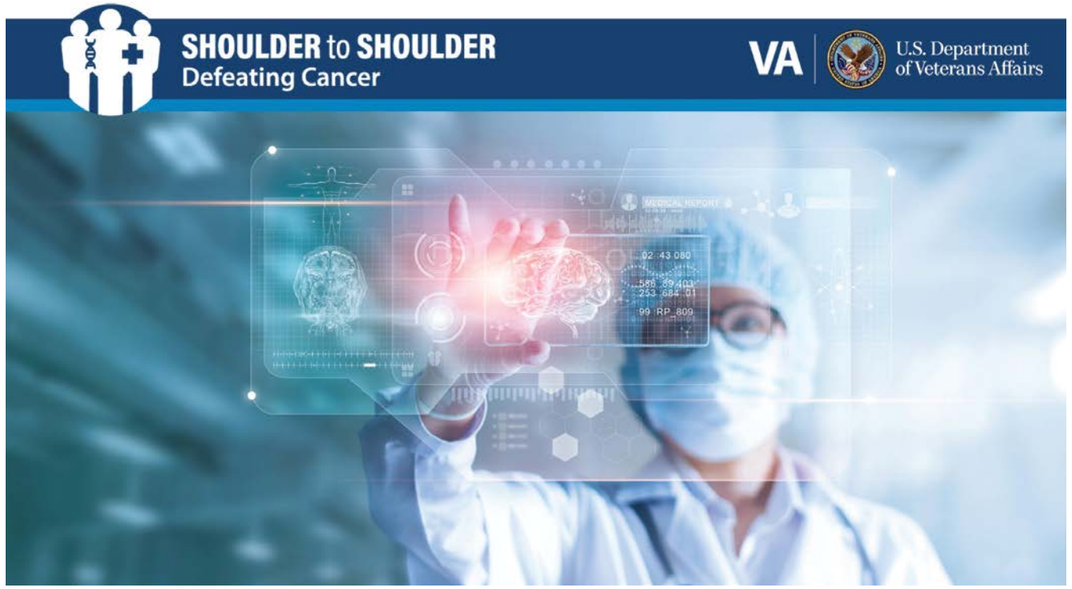


*Photo courtesy of the VHA*

The Lupkeses describe the treatment as stellar and the overall experience as comforting.

Another example of industry support includes the Prostate Cancer Foundation's $50-million commitment to work with VA in building Centers of Excellence across the country. The partnership provides services that help prevent, screen and promote research.

VA is also collaborating with the IBM artificial intelligence (AI) program, "Watson," for genomics. This partnership supports Veterans suffering from late stage cancer. More than 2,700 Veterans have benefited from this collaboration. Based at a central hub in Durham, North Carolina, the public-private partnership's oncologists and pathologists receive tumor samples from patients nationwide to sequence the tumor's DNA. Watson then interprets the genomic data, identifies relevant mutations, and suggests potential targeted treatment options by cross-referencing findings against medical literature on approved and investigational therapies.

According to IBM and VA, more than one-third of the patients treated through this program are from rural areas, with limited access to trained oncologists and personalized cancer care. The department's precision oncology program primarily supports stage-4 cancer patients who have exhausted other treatment options.

> Veterans are particularly vulnerable to certain types of cancer due to their service in various challenging environments around the world. At VA, approximately 50,000 Veterans are diagnosed with cancer each year. Of these, about 15,000 are prostate cancer and 7,700 are lung cancer.

Veterans should have access to the most innovative, quality healthcare services, and VA is a demonstrated leader in providing these practices. To learn more about precision oncology treatment options, contact your VA provider.

## More information

For more on VA's Precision Oncology Program visit: https://www.cancer.va.gov/CANCER/NPOP.asp

See Dr. Richard Stone, Former Acting Under Secretary for Health, VHA, discuss Precision Oncology Partnerships and teleoncology at https://youtu.be/8SsZAIdTquI

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ONCOLOGY

# Early Screening for Lung Cancer Saves Lives

By Erica Sprey, VA Research Communications

Vietnam Veteran Bobby Richardson can attest to the effectiveness of early screening for lung cancer. Last year, he found out that he had stage 1 lung cancer when he took part in a nationwide VA program to boost the number of Veterans screened for lung cancer. He then got treatment through a VA clinical trial.

The 69-year-old resident of Bloomfield, Indiana, says his VA doctor recommended screening for lung cancer based on his family history. Several aunts had died from cancer and Richardson had just lost his brother to advanced lung cancer. Following his own diagnosis, his sister was diagnosed with a different form of cancer.

### Brother's cancer diagnosed after switching to VA care

"My brother didn't have any symptoms up until the last year before he found out he had lung cancer," Richardson said. "He kept complaining that something was wrong. His doctor said, 'You are just getting emphysema.'" It wasn't until Richardson's brother switched his care to VA that he was diagnosed with stage 4 lung cancer.

Richardson, who drives a lumber truck for a living, says he was happy to participate in the screening program, the VA Partnership to increase Access to Lung Screening, or VA-PALS. "I was glad to do it because cancer runs in my family," he said. "That way I didn't have to worry about it." Fortunately, his doctors caught his cancer early when it was still treatable.

The study through which Richardson subsequently got treated is the VA Lung Cancer Surgery Or Stereotactic Radiotherapy (VALOR) clinical trial. The VA-sponsored study compares two treatments for lung cancer — surgery vs. targeted radiation.

Pulmonary oncologist Dr. Catherine R. Sears meets with Richardson.
*Photo by Mark Turney, Public Affairs Officer for the Richard L. Roudebush VA Medical Center*

Investigators hope to find out which treatment results in a better five-year survival rate for stage 1 non-small cell lung cancer. "I would definitely recommend other Veterans get screened."

Study locations include these VA medical centers: Long Beach, California; Bay Pines, Florida; Atlanta, Georgia; Hines, Illinois; Indianapolis, Indiana; Minneapolis, Minnesota; Durham, North Carolina; Pittsburgh, Pennsylvania; Houston, Texas; and Richmond, Virginia. Investigators aim to enroll 670 participants.

### Average age of diagnosis for lung cancer about 70

Historically, surgery to remove cancerous tissue has been the standard for treatment of stage 1 non-small cell lung cancer. However, surgery can be physically taxing for some patients, especially those who are elderly. Given that the average age of diagnosis for lung cancer is about 70, advanced age can be a significant factor in patient survival.

A newer FDA-approved treatment called stereotactic body radiation therapy (SBRT) delivers high-dose X-rays to cancer cells. In frail or elderly patients, the therapy is easier to tolerate than surgery. Both surgery and SBRT can cure stage 1 non-small cell lung cancer. But no large studies have compared the effectiveness of these two therapies in patients who are healthy enough to get surgery. VA researchers aim to collect data that will help physicians choose the most effective treatment for each patient.

### Tailored options for patients

Dr. Drew Moghanaki, radiation oncologist and co-chair for the VALOR study, believes that providing more options for patients with lung cancer is critical. "If we had data that showed that surgery or radiation therapy was better for a given patient, then we would be able to use safety and other criteria to decide which treatment to give," he said. "We would have more options to better match each patient to the optimal treatment."

One year after treatment, Richardson is cancer-free. He will undergo follow-up care in VA for five years. He says he's one of the lucky ones. "My experience was pretty positive because my doctors cured me," Richardson said. "The thing of it was, I never felt sick, never felt bad. I didn't even know I had cancer until they told me. I would definitely recommend that other Veterans get screened."

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OPHTHALMOLOGY

# Blindness from Glaucoma often Prevented with Early Treatment

By Randy Kardon, MD PhD, Professor of Ophthalmology, and director of Iowa City VA Center for the Prevention and Treatment of Visual Loss, and Markus Kuehn, PhD, Professor of Ophthalmology, and associate director of Iowa City VA Center for the Prevention and Treatment of Visual Loss

Glaucoma is a leading cause of blindness for Veterans over 60. But blindness from glaucoma can often be prevented with early treatment.

The disease damages your eye's optic nerve. It usually happens when fluid pressure builds up in the front part of your eye. That extra fluid increases the pressure on the optic nerve. It can reduce blood flow to the optic nerve, causing damage and visual field loss.

Some forms of glaucoma can damage the optic nerve from reduced blood flow, even when the eye pressure is in the normal range during the eye exam. This can happen when the eye pressure becomes high at other times of the day and the patient does not feel the pressure elevation.

It can also happen when blood flow to the optic nerve becomes reduced below a critical level. That can happen during periods of very low blood pressure, even during sleep.

### Obstructive sleep apnea can adversely affect glaucoma

In some patients who take their hypertension medications right before bedtime, it can cause the blood pressure to drop too low during hours of sleep. Another risk factor that can adversely affect glaucoma is obstructive sleep apnea. That may also reduce the delivery of oxygen to the optic nerve.

*Photo courtesy of VHA*

### Risk higher for African Americans

The prevalence of glaucoma is three times higher in African Americans than in non-Hispanic whites. Additionally, the risk of visual impairment is higher and the age of onset is earlier than in whites.

Veterans enrolled in VA health care can schedule appointments directly with Ophthalmology or Optometry without a referral from primary care. Schedule an eye exam at your VA health care facility.

### VA research provides valuable tools for vision treatment

VA is at the forefront of vision research and glaucoma is one of our top priorities. A current study by Dr. Markus Kuehn is a Bioassay to Predict the Development and Progression of Glaucoma. The VA Rehabilitation, Research, and Development Division sponsors the study.

The project uses our recent discovery that glaucoma affects the development of a cellular autoimmune response that can further reduce vision. The investigators are testing if the strength of the reaction from a blood sample is predictive of future loss of vision and quality of life of the patient.

### Using Artificial Intelligence to diagnose severity of glaucoma

Another Iowa City VA study by Drs. Randy Kardon, Mona Garvin, Ray Wang, Young Kwon Johannes Ledolter and Michael Wall is using a new type of artificial intelligence of image analysis. This intelligence is called a deep learning variational encoder. It diagnoses the severity of glaucoma, detects the earliest signs of worsening vision and its response to treatment.

They are also relating the eye imaging to Veteran quality of life.

Early identification of patients at high risk to develop vision loss allows more aggressive treatment before the damage occurs. The development of a predictive assay and new types of eye imaging analysis will provide eye care providers with valuable new tools to preserve the quality of life for Veterans.

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OPHTHALMOLOGY

# Research Improves Tele-eye Screening for Veterans

In 2015, VA launched the Technology-based Eye Care Services program, or TECS. The tele-eye screening program now serves 22 VA facilities across the country.

TECS brings remote eye screening services to rural or underserved Veterans who might otherwise have limited access to a screening eye exam or new glasses. It is not intended to replace an in-person eye exam and is one of several options that Veterans can choose for their eye care.

### Researchers study possible enhancements

VA's Dr. April Maa and coauthors recently published a study that tested the impact of adding of a special imaging test to the TECS screening exam. They found that adding optical coherence tomography (OCT) did not improve remote providers' accuracy in detecting glaucoma or retinal disease.

The researchers recommend further study. They believe OCT results might change with remote glaucoma or retinal specialists who are well-versed in reading OCT images.

Maa is the clinical director for regional telehealth services in VISN 7 Center, and section chief for TECS. The ophthalmologist divides her time among treating eye disease and performing surgery, helping Veterans preserve their vision, and training ophthalmology residents. TECS is her brainchild.

Maa and her team saw a need for tele-eye services within the VISN 7 catchment area, which includes many rural communities in Alabama and Georgia. She says that prior to TECS, Veterans at the Atlanta VA had long waits to see an eye doctor.

### Passionate about eliminating disparities

"My entire team is passionate about health care disparities. Just because you live in [rural] Blairsville, Georgia, doesn't mean you should get less care than other people," says Maa. "Those system-based barriers are reduced with telemedicine. We can bring the patient a huge amount of subspecialty care that they might not otherwise have access to."

In TECS, technicians see patients at their primary care clinic. They gather a medical history, take vision measurements, and conduct a manifest refraction test. That test measures

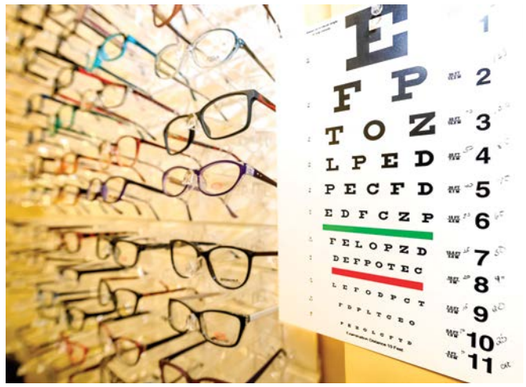


*Photo courtesy of VHA*

nearsightedness, farsightedness, and astigmatism.

The technicians also measure eye pressure and photograph the retina. Once the visit is complete, the patient's data and photographs are shared with a remote eye specialist. The specialist reviews the results, makes referrals, and prescribes eyeglasses or medication, if necessary.

### Recommendation: Alternate with in-person exams

If patients need a follow-up visit, they receive a call from the provider. If everything is good, the patient receives a notice informing them of their results. Maa says the TECS screening should be alternated with regular in-person eye exams.

She says both rural Veterans and their health care providers value TECS.

"The patients love it and the primary care providers appreciate having eye services at the primary care clinic. We have been able to pick up a lot of very serious eye disease in our Veterans to prevent blindness and get them timely access to care."

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PULMONOLOGY

# COPD Rehabilitation in Veterans' Homes Bolstered by VA Video Connect

By Rya Butterfield, PhD, public affairs specialist with the Southeast Louisiana Veterans Health Care System

If a Veteran is receiving care for chronic obstructive pulmonary disease in the Southeast Louisiana Veterans Health Care System, their physician might order a consult with pulmonary rehabilitation coordinators Mary Labiche and Zina White.

Before the pandemic, this would have meant face-to-face sessions in the pulmonary rehabilitation gym. Veterans can now attend from home.

Labiche and White help a patient remotely log on to the Video Virtual Connect platform in the pulmonary rehabilitation gym at the New Orleans VA facility.

Pulmonary rehabilitation helps patients who are suffering with persistent symptoms, like breathlessness or loss of stamina, improve their quality of life.

Respiratory therapists guide patients through stretches and exercises to increase muscle strength and lung capacity. Patients also receive education about exercise pacing and their disease to effectively care for themselves once the program has ended.

### Educators, trainers, cheerleaders

As rehabilitation leaders, Labiche and White must be educators, trainers and cheerleaders rolled into one. They provide an essential service to sufferers of chronic lung disease.
When the coronavirus pandemic limited face-to-face services one year ago, Labiche and White pioneered virtual pulmonary rehabilitation. It is hosted on VA Video Connect, a live video platform that connects Veterans to their caregivers on any computer, tablet or mobile device with an internet connection.

Army Veteran Harvey Malone was among the first participants to graduate from the virtual version of pulmonary rehabilitation. He speaks highly of Labiche and White's skill at engaging participants over VA Video Connect.

"Their communication was outstanding," Malone said. "It made me want to participate. It made me want to improve myself to get better."

### "I look forward to Tuesday mornings"

Before the pandemic, Malone attended pulmonary rehabilitation in person at the New Orleans Veterans Medical Center. He then transitioned to rehabilitation online. In Malone's eyes, the move online was positive.

"We established a bond," Malone said, reflecting on his interactions with the other participants. "We were a very close-knit team. I looked forward to Tuesday and Thursday mornings during the program."

The VA video connect platform enabled him to build camaraderie with his program peers.

"At first, the choice to go online was a matter of getting Veterans the help they need during the pandemic," White said.

Now Labiche and White intend to continue a virtual rehabilitation option after in-person meetings resume.

"The virtual program can reach people that can't travel to attend rehabilitation in person," said Labiche. "We realized that virtual pulmonary rehabilitation is just as effective as when it is done in person. Having it as an option will help us improve quality of life for more Veterans."

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PULMONOLOGY

# Researchers Strive to Make 3D-printed Artificial Lung to Help Vets with Respiratory Disease

By Mike Richman, VA Research Communications

VA scientists are working to create a 3D-printed artificial lung that they tout as having the potential to revolutionize the treatment of Veterans affected by lung disease. One such lung disorder — chronic obstructive pulmonary disease (COPD) — is one of the most prevalent and costliest ailments in the Veteran population.

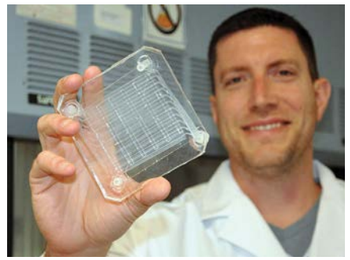
Dr. Joseph Potkay, a biomedical engineer at the VA Ann Arbor Health Care System in Michigan, is leading the VA-funded research. It calls for making a prototype of the 3D-printed artificial lung. Potkay and his team hope to build what they call the first wearable artificial lung that is compatible with living tissue and is capable of short- and long-term respiratory support.

The lung is seen initially as a temporary measure, a bridge to help patients awaiting a lung transplant or an aid for those whose lungs are healing. Future versions could have longer-term applications, the researchers say.

Potkay says this is the first time high-resolution 3D polymer printing is being used to create microfluidic lungs with three-dimensional blood flow networks.

Microfluidic artificial lungs, a new class of artificial lungs, mimic the structure of the natural lung better than conventional artificial lungs. Tiny blood channels, some thinner than a human hair, are closer in shape and dimension to those in a person, allowing for blood flow similar to that in the human body.

The biocompatible coatings on the lung's surface are equally important. Anytime blood comes in contact with an artificial surface, an immune response leads to hardening of the blood and clotting. Biocompatible coatings will help curtail that immune reaction.



Biomedical engineer Dr. Joseph Potkay, with the VA Ann Arbor Health Care System, displays a 2D prototype of an artificial lung. A 3D version is in production. *Photo by Brian Hayes*

"We hope that these microfluidic flow paths and biocompatible coatings will be more compatible with living tissue, thereby reducing the body's immune response and increasing the lifetime of the device," says Potkay, who is also a researcher at the University of Michigan. "The flexibility in design afforded by 3D printing gives us more freedom and thus the ease to build artificial lungs with a small size and pressure drops that are compatible for operation with the body's natural pressures."

## 3D printing allows for flexibility in blood channel design

For more than a decade, Potkay has been researching the advantages of microfabrication, the recreation of tiny structures, to build artificial lungs that have highly efficient gas exchange and blood paths similar to those in a human lung. Gas exchange is the amount of oxygen or carbon dioxide ($CO_2$) that is transferred into or out of blood in the artificial lung.

"However, microfabrication is mainly a two-dimensional construction technology," he says. "With a 2D design, you stack many single 2D layers together. That has limited the ease of creating devices that are large enough for human use. You have less freedom in how you design the blood channels. 3D printing these devices may be a solution to these problems. We can be much more precise and efficient with how the blood flow path is laid out in three dimensions."

Potkay's team is working with Old World Labs, a company in Hampton, Virginia, that specializes in high-resolution 3D printing. The firm should be able to produce a small-scale functional prototype sometime in the coming months, he says. The prototype will be about a half-inch cube in size, and the 3D-printed human-scale lung should occupy no more than a six-inch cube space, he notes.

Potkay envisions the human 3D device fitting in a backpack or a small butt pack, with potential use of more than a week. After more development, he expects longer-term use will be possible.

He says it's impossible to gauge how many years away the 3D-printed lung is from implantation, noting that it must first be tested on animals and people. "We'll see how well it does in terms of lifetime," he says. "To be implantable, it needs to be able to operate for months without being swapped out."

Heart-lung machines that contain artificial lungs have long been in use to rehabilitate lung disease patients. But these machines are bulky pieces of equipment in which all components are mounted on a wheeled pole. Some people call these portable or ambulatory lungs, but in Potkay's view they are not truly portable.

These machines also require pure compressed oxygen stored in heavy cylinders. However, major advances in gas exchange, compatibility with living tissue, and portability are needed for artificial lungs to fully realize their potential. The device must also maintain appropriate blood pressure, decrease injury to blood cells, and minimize clotting and immune response. Microfluidic artificial lungs use a fraction of the volume of blood of current commercial devices.

## Researchers eyeing Veterans with end-stage COPD

In their research, Potkay and his colleagues are focusing on patients with a buildup of $CO_2$ in the blood, an occurrence that applies to many Veterans suffering from end-stage chronic obstructive pulmonary disease. End-stage COPD is marked by severe shortness of breath, chronic coughing, lung infections, or respiratory failure. It can lead to sudden cardiac death. Excess $CO_2$ must be removed from the lungs to stop it from reaching unhealthy levels.

COPD affects 5 percent of American adults and 16 percent of the Veteran population. Most people with COPD have emphysema, in which the air sacs of the lung are damaged and enlarged, and chronic bronchitis, a long-lasting cough caused by chronic inflammation of the bronchial tubes. The disease is characterized by an airflow limitation that is often linked to an abnormal response of the lungs to noxious particles or gases, such as those in cigarette smoke.

Exposure to burn pits, sand, diesel exhaust, and chemicals are some of the most commonly cited factors that lead to lung problems for active-duty military. About 20 percent of patients with severe traumatic brain injury also have acute lung injury.

In 2011, Potkay unveiled a prototype of a 2D-printed artificial lung that used traditional microfabrication techniques. It was a collaborative effort between Case Western Reserve University in Cleveland and the Advanced Platform Technology Center at the Louis Stokes Cleveland VA Medical Center, where Potkay was affiliated at the time. The prototype was unique in how it copied nature. Because of its intricate silicon tubing and ultra-thin gas diffusion membrane, the device was efficient enough to use air as the ventilating gas — as opposed to pure oxygen stored in a tank. It thus created new possibilities for portability and possibly implantation.

The 3D-printed lung will provide the same basic advantages, Potkay says. "But with the freedom afforded by being able to design the device in three dimensions instead of two, 3D printing should result in artificial lungs with a smaller overall footprint and with increased efficiency," he says. "Thus, portability and performance will potentially improve using 3D printing."

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RHEUMATOLOGY

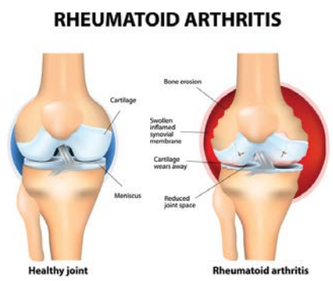
# VA/DoD Clinical Practice Guidelines Update

## The Non-Surgical Management of Hip & Knee Osteoarthritis (OA) (2020)

The OA CPG recommends a framework that includes a structured evaluation and diagnosis of Veterans and Service Members who may be suffering from hip and knee OA. Additionally, the CPG provides treatment options, including pharmacological, non-pharmacological, complementary and alternative medicine, as well as options for referral for surgical consultation. The guideline is formatted as a single clinical algorithm and 19 evidence-based recommendations.

Osteoarthritis (OA) is the most common type of arthritis and sometimes referred to as a degenerative wear-and-tear joint disease. As cartilage, the slick tissue that covers the ends of the bones, wears away, it no longer cushions the joint and causes the bones to rub against each other. This causes pain, swelling, stiffness, and difficulty moving. Risk factors for developing OA include obesity, being older than 40, past joint trauma, concomitant inflammatory arthritis, repetitive joint use, and a family history of OA.

*Photo courtesy of Medlineplus.gov*




Molecular differences between knee and hip joints with rheumatoid arthritis may inform more personal treatment strategies.
*Photo courtesy of Sebastian Kaulitzki/Hemera/Thinkstock and nih.gov*

OA can affect any joint. Weight-bearing joints, such as the hips and knees, are often affected. Common symptoms are joint pain and stiffness. Pain and stiffness may get worse with inactivity or overuse. For example, patients may have more stiffness first thing in the morning, usually for less than 30 minutes, or have stiffness after sitting for a long time. They may also experience more pain in their hips or knees from walking further distances than normal.

Other common symptoms include:

- Weak muscles
- Unstable or wobbly joints
- Grinding or crackling noises with motion
- Joints with swelling or bumps
- Unable to bend and straighten joints (reduced range of motion)

Resources to complete OA Guidelines are available at: https://www.healthquality.va.gov/guidelines/cd/oa/index.asp

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SURGERY

# Honoring the Women Surgeons of Denver VA

By Terri Rorke, Public Affairs Specialist for the VA Eastern Colorado Health Care System

In honor of Women's History Month, we wanted to take a moment to highlight the women surgeons of the VA Eastern Colorado Health Care System. These surgeons follow in the footsteps of Dr. Mary Edwards Walker, the first female surgeon on record in 1855. Not only do these women surgeons provide outstanding care, they are also a welcomed representation for other women — one of the fastest growing groups in the Veteran population.

Dr. Jessica Rove, cardiothoracic surgeon, knocks on Vietnam Veteran Wayne Bullock's hospital room to check on him while he sits by the window, healing after a major surgery. "How are you feeling?" she asks.

"You are the best," he says, without hesitation. "I'm recovering quite well. That's a testament to you and your team."

Rove took a seat to spend time with her patient. She knows that surgery is more than repairing people's bodies — it's about trusting relationships. She listens intently to the Veteran as he shares vivid memories of his service and she doesn't leave without shaking his hand, telling him, "This has been a true honor."

As one of 13 women surgeons at VA Eastern Colorado Health Care System (ECHCS), Rove and her counterparts dedicate their time to providing Veterans with comprehensive, high-quality care. These women make up 22 percent of all ECHCS surgeons, collectively providing care across 10 specialties for most anything a patient would need from head to toe: Neurology, Ophthalmology, Ear, Nose and Throat (ENT), Cardiothoracic, Vascular, Orthopedic (Hand), Breast, Gynecologic, Podiatry and General Surgery. As healers, teachers and leaders in their fields of practice, teamwork drives every role they live and work each day.

Dr. Rajshri Bolson specializes in orthopedic hand surgery, operating at the Rocky Mountain Regional VA Medical Center.

"It takes a village," says Dr. Rajshri Bolson, who specializes in orthopedic hand surgery. By 11 a.m. she's already scrubbing to perform her second surgery of the day — removing a metal plate from a patient's wrist, a post-fracture injury. Bolson splits her time between the clinic and administrative duties as assistant chief of Surgery for ECHCS — a system with just over 138,000 enrolled Veterans. When not tending to her busy clinical practice, she's mentoring medical trainees, studying the latest research, and leading the surgery department into the future with a constant drive to expand patient access and services.

While also giving credit to collegial and home support, Bolson — a wife and mother of two — recognizes the balance she and her colleagues alike must carry through daily, demanding schedules.

"As physicians, there is a lot required of us and it takes a certain kind of person who can juggle it all, remain focused on day-to-day priorities and keep the patients' needs first and foremost," says Bolson, who's been in practice 10 years now. "I've been very much inspired by people I have met along the way — both female and male."

Bolson says she was first drawn to her chosen specialty because she likes to solve problems, to work with her hands, and to have a direct effect on "restoring function" and quality of life for patients. In hand surgery, the goal is very much to help patients return to their job, hobbies and activities of daily living so they literally and figuratively can feed themselves and their loved ones.

> As physicians, there is a lot required of us, and it takes a certain kind of person who can juggle it all, remain focused on day-to-day priorities and keep the patients' needs first and foremost.
>
> — Dr. Rajshri Bolson

Dr. Katrina Oyague

According to a 2019 joint report by the American Medical Association and Association of American Medical Colleges, male doctors dominated orthopedic surgery (85 percent), neurological surgery (82 percent) and thoracic surgery (78 percent) — all specialties represented by ECHCS women surgeons.

Despite these data and the historical challenges women have faced, surgeons like Bolson continue to forge through a traditionally male-dominated field while paving the way for others.

"Certainly, I have benefited from the exceptionally hard work women in medicine have done before me, and more work is still needed," says breast surgeon Katrina Oyague.

Oyague talks about how the surgical process is "a very unique relationship" that starts with establishing rapport and trust at the time of diagnosis and continues through the actual operation and, finally, recovery and surveillance.

One and a half years into her time with ECHCS, Oyague is grateful to serve the unique needs of women — one of the fastest growing groups in the overall Veteran population. At VA ECHCS alone, nearly 12,000 women Veterans were cared for in fiscal year 2020, an increase by 9% from 2018.

This growth is anticipated to continue and Oyague hopes women Veterans continue to seek VA care for specialty services and women's specific needs.

Like Oyague, Rove wants all Veterans, including women, to know they can go to VA for care like cardiothoracic surgery. Out of the 200 cardiothoracic cases she's performed since the Rocky Mountain Regional VA Medical Center opened in August 2018, Rove notes that only two of them were women Veterans, despite the prevalence of cardiac disease found in the general population.

While it will require continued education and outreach to help Veterans — of all gender identities — to understand what services may be available to them, Dr. Brook McConnell, ENT Surgeon, is personally glad Veterans have VA for "equitable, evidence-based care, regardless of their socioeconomic status, insurance status or location of health care delivery."

When McConnell looks back at her six years and counting with VA, what stands out most to her is being able to work in a daily practice of "actually doing something meaningful and real."

VA is here to serve all who have served.

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From left: Orthopedic Hand Surgeon Dr. Rajshri Bolson; Gynecologic Surgeon Sz-Min Harley; Ear, Nose, and Throat (ENT) Surgeon Brook McConnell; Cardiothoracic Surgeon Jessica Rove; and Breast Surgeon Katrina Oyague are five of 13 women surgeons at VA Eastern Colorado Health Care System. While these 13 women make up 22 percent of all surgeons in the health care system, they collectively provide care across 10 specialties for most anything a patient would need from head to toe.



Armed Forces Medicine 2021

*Veterans*
TECHNOLOGY

# The Advancement of 3D Printing for Veterans

Statement by VHA Director Dr. Beth Ann Ripley

Dr. Beth Ann Ripley, Radiologist and the Director of the VHA 3D Printing Network at VA Health Care Systems

One of my favorite things about VA is actually that we were a very early adopter of 3D printing technologies, because we have two hospitals that have been 3D printing for over a decade now. Which is pretty impressive, but, it was just those two and they were printing quietly within their respective hospitals. When we got wind of that we started looking around and realizing how powerful the technology could be for creating personalized healthcare solutions for Veterans. So in 2017, we started a program to create a network across the VA and introduced 3D printers into five hospitals, and strategically we placed them across the country, in a means of the west coast, to the east coast, involving the southwest then working up, and that was really the start of the VHA's 3D printing network.

The idea was to harness expertise across the organization, because when we looked and asked we realized there's a lot of people with a lot of talent beyond what they are doing at work, and a lot of enthusiasts in 3D space that also happen to work at the VA and are happy to share that knowledge, so we linked together. The magic here is instead of it being, this is a 3D printer in this particular VA hospital, from the very beginning the thought was that we want to share these resources, we want to share the expertise, and we want to create a network where any Veteran can go into any VA hospital across the country, whether or not there is an expert there or a printer there, they can have access to 3D printing technology.

So that's the vision, and since 2017 we have continued to grow. We've gown to almost 60 hospitals now within the VA that have 3D printing capabilities and we're just shy of 300 printers across that network.

In the beginning really there were two main areas that we were interested in, one of them was the creation of specific technology devices, these are basically anything you could imagine that would help the Veteran interact better with his or her environment. It could be if somebody had a tremor or difficulty holding something, we can create something to help them like, a bigger remote control for the TV, maybe they couldn't push the small buttons, they would design something specifically for that.

There was a patient with a traumatic brain injury that loved to play pool, and he lost his ability to use one of his arms effectively so they created this spoke item that could hold the end of the pool queue, and he would be able to shoot pool with one hand.

Basically the sky's the limit, things that you can't go into the store and buy, because they are very unique to a person, but with the right ingenuity, you could create. So that was one category, assisted technologies.

The other that we really focused on early in time was pre-surgical planning. And the idea there is each one of us has such unique anatomies and pathologies, wouldn't it be nice if the surgeon could see what your heart looks like or your kidney looks like before they ever went into the operating room so they would know exactly what they are up against, what could go wrong, what could go right, how to do it, and can even practice or rehearse before they go in? If you think about sports, you take a practice swing in golf or a couple of them before you actually hit the ball, why not do that with surgery?

Using 3D printing we were able to take patients recent medical imaging, if they had a CT scan or MRI scan, before surgery we can take that and extract literally hundreds or thousands of two dimensional slices in black and white, and translate that back into a tangible 3D object that you can hold in your hand. They are holding the patient's kidney and it is the exact size of kidney, all the relational anatomy is there, the vessels all around it, structures you would want to be careful about, hold all of that in your hand and really understand three dimensionally what you are up against.

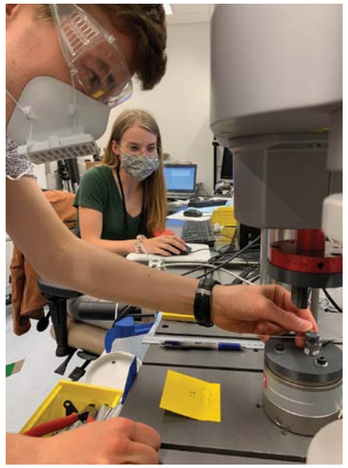
Those are the two things that we started with and since then it's grown. There are a lot of dental applications, and of course we're very interested in orthotics and prosthetics, how to make prosthetics that are lighter weight, more mobile, more of a close fit for Veterans. And those were the items pre-pandemic that we were focused on.

And then of course the pandemic hit in March of 2020 and it hit our need in Washington where one of our main hospitals are, as well as New York city, and we started getting calls from colleagues asking us, can you create masks? It feels like ages ago now but there was a severe shortage of PPE, so they asked, can you 3D print a mask and we said, well that seems difficult, I don't know, maybe, but again using this technology that we've been learning is, if you can imagine it you can make it.

So we said okay, we've just got to think about it a little bit differently and yeah let's try. And so we actually spun up a surgical face mask that was 3D printable in ten days, subsequently put that through testing to confirm that it matched the standards set out in the FDA emergency use guidelines to meet the requirements of a surgical facemask, and we were able to produce that, in smaller quantities but still produce that at the point of care in the hospital, and we were able to bridge the gap until the supply chain opened.

Same idea, we did this with face shields. We created many face shields and I think we are at 50 hospitals now, before the pandemic it was 34, and a bunch of hospitals jumped in and said we can help, and they got small printers, we got the blue prints, figured out what we're going to update for effective design, we share that out across the organization, people grabbed it and started printing. So it was really this amazing grass roots ground level effort of people in the hospitals, printing PPE to share, not only in their hospitals but with other VAs.

Another unintended, but I think really fortuitous thing to have happened with COVID-19 is, as the supply chain ebbs and flows, the next thing that we were asked to tackle were nasal swabs, and this is when testing was so important, before vaccines we had to test as many people as possible, and nasal swabs, although it may look like a Q-tip it's not,



it's actually more sophisticated than that. When nasal swabs were in short supply we were asked to create that, but that requires creation within what is called a good manufacturing practices or GMP certified tag, and it requires registration with the FDA.

So in order to do that we found ourselves having to register 3 hospitals with FDA medical device manufacturing and there's a lot that goes into that, there's some significant quality management that needs to go around that and info structure, so we've been really busy in the last six months building up all of the qualities and regulatory pieces that are required to do that, and we've successfully register 3 hospitals in December 2020.

We did that for nasal swabs, but again the "aha moment" once we did that was, we could design and create patient matched medical devices for Veterans. The first one which is very exciting is out of Charleston South Carolina is a Veteran that came in with hearing loss and a pretty rare condition where his external ear canal was basically blocking, you think of a tunnel you want a tunnel to stay open you wouldn't want the walls to fall in and the tunnel going into his ear was sort of collapsing in on itself, and that Veteran had an idea on how to fix that by actually putting drinking straws in his ear to try and open it up and while we said that's not the greatest idea but we love where you are going, so one of the 3D printing engineers there worked with the Veteran and his Audiologist to design several iterations of this device and kind of finally found the right one.

And because we were registered with the FDA as a medical device manufacturer we were able to get authorization to create this device for this Veteran. So now we have it, one of a kind, a device that saves him from surgery.

Now we find ourselves in a brand new situation where we can start to think about custom devices for Veterans, when we couldn't get off the shelf, so I think what you're going to see in the next two or three years coming out of VA is a lot of work to build out capabilities to create medical devices. These might be external devices or as we evolve internal implants, lets say a hip and there's only a certain amount of sizes of hip implants, small medium and large, and we know that might work for a lot of patients but it might not work for everyone. I think you're going to see us really focusing on creating those things that we can't buy because it's not made anywhere. When you have Veterans that don't have options for off the shelf products, we are going to be designing and creating it for them.

Using high resolution medical imaging, when you think about the technology there are different types of 3D printers but they all have one thing in common, which is, they read a digital blue print of an item and create something from that digital blue print. I have an old draft table that I got from an architect friend and we used to sit and draft these drawings, different 2 dimensional drawings of looking top down from the right to the left, etc., but with CAD software, computer aided design software, a lot of architects have moved digitally to create this 3D digital blue print, it turns out that when you do a CT or an MRI scan, when you've taken all of those links of the 2 dimensional drafting images you can create a 3D digital blueprint from it.

They are a 3 dimensional blueprints so you can actually just take that imaging and plug it into the printer and create an item. But now I did simplify it, if you did that you would end up blob so the magic behind it is for instance, how you can take only a certain piece of the heart from the imaging to create exactly what you want. The CT and MRI imaging lends itself very well to being able to create the patient's digital blueprint that can go into the printer.

For example with the hip, the patient would come in first to get a CT scan so we would know exactly what all of the bones structure looks like, then I put that into the CAD program to engineer, so its designed to be a perfect fit into the patient's anatomy before that design would go into the printer.

We've been bringing in a lot of engineering talent, and we have a lot of engineering talent within the VA already such as biomedical engineers, and we are tapping into that, and asking them to help and they are becoming part of the healthcare clinical delivery team, where the patients are now benefiting from all that engineering expertise that's now being redirected into helping design not only hospital equipment but hips and parts for whatever the need is.

Using the network, we can also produce specialized products for patients at remote locations where they have imaging but not printing capabilities. We did a case like this a couple weeks ago where the patient was at the Atlanta VA to get a heart valve replaced, they did the imaging in Atlanta and sent those images digitally to Seattle where they made the models and printed it out, and then overnighted it back to them. The whole thing took less than 48 hours and that's exactly what we want to do, because we want to maximize the resource.

It wouldn't make sense necessarily to have a printer sitting in every hospital if there's not enough demand, and it would hard to find that many engineers, so it may be that we have the patient at one hospital, the engineer designing the part at a second hospital, and the part being printed at a third hospital, then going back to where the patient is. This means we can help people in far away areas, remote locations.

One of my favorite stories is about a Veteran who was being considered for a very complicated hip surgery and he was located in rural Alaska, and the closest hospital was in Seattle so he would have to get on two planes to go from rural Alaska to Juneau, and then to Seattle. So what he did was actually get the imaging in his home town, that imaging was sent to Seattle, where we created two versions, two copies of his hip and gave one to the surgeon in Seattle and shipped the other back up to the Veteran's primary care physician in his home town, then we were able to get on a video conference where everyone could be look at the anatomy and the surgeon realized when he was looking at the model that there were bone fragments that could make this a really dangerous surgery to perform, and ultimately were able to decide that surgery was not a good option and come up with a different strategy where the patient was able to be a part of that, all without him ever having to leave his home town.

This prevented him from having to go through all the trouble of coming down to Seattle and discovering these bone fragments in the middle of the surgery, not being able to continue with it, and then he is stuck in Seattle having to go through rehab without any appreciable improvement. So the amazing thing is that we were able to bring the specialist to him by a combination of telehealth and also by the technology allowing the specialist to really see what was going on so he could ultimately determine that surgery was not a good idea without putting the patient in any danger.

Materials used for 3D printing are also specialized for use with the human body. There are literally thousands of different types of materials that can be used, anything from plastic, to metals, ceramics, to glass. People 3D print foods, chocolate frosting is probably one of my favorites. Pretty much anything can be 3D printed and its growing everyday, and there's a really robust industry around creating new materials. Many of these materials are being design specifically for the medical space, some of them are materials that we use anyways like a peak plastic that's in a lot of implants. There is a titanium 3D printer that we will be acquiring in the VA in the next year or so that can print titanium implants, and many other biocompatible materials that allow us to think about different types of metals and combinations that are better matched to the patient's bones that will perform better.

So I think that's another thing you are going to see in the next few years as the technology continues to evolve, we'll be designing different types of materials and hybrid materials so that we can choose just the right material for each patient. We can make nylons and rubbery type materials, there is already a lot of choices and it feels like everyday you wake up and there's a new material out there just waiting to be tested.

Overall 3D printing is something that is unique to VA. I don't think anyone else is doing this on this type of scale we are, and it really is because of our mission to serve Veterans, and the organization was able to buy in early and support the technology. So I just want to say that I'm thankful to the VA for having this mission and it's really what allowed us to be able to explore this technology. Early on it took years of dedication, resources, and commitment to get this far, so its a testament to the mission that the organization gives back.

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*Veterans*
TECHNOLOGY

# ATLAS Q & A

Lesly Roose, RN, ATLAS Program Manager

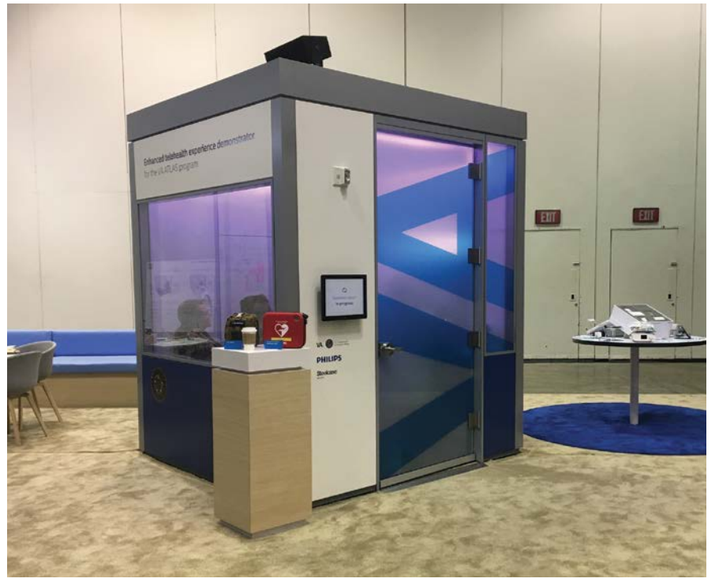
As Program Manager for Accessing Telehealth through Local Area Stations (ATLAS), Lesly Roose, RN, combines her clinical experience with her dedication to telehealth to provide services for over nine million Veterans who rely on VA for health care. Ms. Roose has been instrumental in developing the ATLAS program to bridge the digital divide by overcoming social, economic and geographic barriers to telehealth by establishing private locations within Veteran's home communities where they can receive VA care.

### What are ATLAS sites and what benefits do they offer Veterans?

- ATLAS (Accessing Telehealth through Local Area Stations) sites are convenient locations for Veterans to access VA care via telehealth in their communities, particularly those with limited internet connectivity, geographic barriers, and long travel times to medical facilities.
- ATLAS sites provide comfortable, private appointment spaces equipped with internet access to meet with VA providers via a secure video connection.
- The ATLAS appointment room also offers complete privacy — free of outside disturbances and distractions — for Veterans to have candid conversations about their physical and mental health with their VA providers.
- ATLAS is made possible through VA collaborations with Veterans of Foreign Wars, The American Legion, Philips, and Walmart.

### How do ATLAS sites help Veterans in rural areas?

- By breaking down barriers to telehealth, Veterans can get the care they need, closer to home.
- ATLAS sites greatly cut down on travel time, so Veterans no longer need to devote hours, or an entire day, to attend VA health care appointments at a VA facility.
- Internet connectivity can also be limited in rural areas and ATLAS sites provide a stable connection and the equipment needed to attend telehealth appointments.




The ATLAS "pod," designed by Philips and equipped with telehealth technology, is one of the latest innovative resources that VA offers to Veterans.



### What should Veterans expect when accessing telehealth services at an ATLAS site?

- Once a Veteran arrives at an ATLAS site, they will be greeted by an on-site attendant who will guide them to the ATLAS appointment space and help them check-in for their appointment.
- The attendant will direct the Veteran on how to connect with their VA provider by video. Veterans meet with their providers through VA Video Connect, VA's secure videoconferencing software.
- Clinical services offered by video may include primary care, mental health counseling, clinical pharmacy services, nutrition counseling, social work services, and more.

### Which Veterans are eligible to receive care at an ATLAS sites?

- Veterans who receive care at one of the VA Medical Centers associated with an ATLAS site are eligible to receive care. The local VA facility that is associated with the ATLAS site determines which clinical services the site offers.

### How many ATLAS sites are currently open?

- There are eleven ATLAS sites across the country. Most recently, two new ATLAS sites opened in Athens, Texas, at Veterans of Foreign Wars Post 7103 and Los Banos, California, at Veterans of Foreign Wars Post 2487.

  All current sites:
  — Asheboro, North Carolina
  — Athens, Texas
  — Boone, North Carolina
  — Eureka, Montana
  — Fond du Lac, Wisconsin
  — Howell, Michigan
  — Keokuk, Iowa
  — Linesville, Pennsylvania
  — Los Banos, California
  — Springfield, Virginia
  — Wickenburg, Arizona

- We expect to open two new ATLAS sites soon in Gowanda, New York, and Emporia, Kansas.

ATLAS sites offer complete privacy for Veterans to meet with their VA providers by video for clinical services, such as mental health counseling or primary care.

### How can Veterans get started using ATLAS?

- Veterans enrolled in care at a VA Medical Center associated with an ATLAS site should talk with their health care provider to determine if telehealth is right for them.
- Veterans looking to schedule an appointment at an ATLAS site should reach out to the scheduling contact for the ATLAS site they are eligible to use.

### What COVID-19 precautions are ATLAS sites taking to keep Veterans safe?

- All ATLAS sites have implemented infection control procedures based on guidelines from the Centers for Disease Control and Prevention (CDC) and the Environmental Protection Agency (EPA) for preventing the spread of COVID-19. They are also following local and state guidelines.
- Once the Veteran completes their visit, the site attendant cleans and disinfects the space in accordance with CDC guidelines to ensure the space can be safely used by another Veteran.

### How successful has telehealth been in serving Veterans during the COVID-19 pandemic?

- Over 1.6 million Veterans used telehealth care in FY 2020 and ATLAS sites are expanding this offering to Veterans who live in rural areas.
- There were over 5.6 million episodes of telehealth care across all VA modalities.

### How can Veterans schedule at appointment at an ATLAS site?

- Veterans should talk with their health care provider about whether a video appointment at an ATLAS site is right for them. To schedule an ATLAS appointment Veterans should call their local VA Medical Center. Additional scheduling contact information can be found here: https://connectedcare.va.gov/partners/atlas

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*Veterans*
WOMEN'S HEALTH

# VA Creates National Women Veterans Oncology System of Excellence in Fight Against Breast Cancer

In recognition of Breast Cancer Awareness Month, the U.S. Department of Veterans Affairs (VA) announced today it is developing a National Women Veterans Oncology System of Excellence through research, partnerships precision oncology and teleoncology that will provide women Veteran oncology patients with cutting edge care and access to potentially lifesaving clinical trials.

Through the National Women Veterans Oncology System of Excellence and current partnerships with The National Cancer Institute, academic medical centers and others, VA is uniquely situated to provide care via teleoncology and decentralized clinical trials to Women Veterans nationwide.

Former Acting VA Deputy Secretary Pamela Powers

"Each year, an estimated 700 women Veterans enrolled in VA health care are diagnosed with breast cancer — calculating to one in eight women diagnosed within their lifetime," said Former Acting VA Deputy Secretary Pamela Powers. "VA's continued work with partnerships, research and innovations are leading to faster cures and better outcomes. Our Veterans deserve no less."

Partnerships with medical and research universities will help advance and expand VA's teleoncology and other services to provide the best cancer care and treatment options to women Veterans across the nation.

As part of this effort, VA is seeking to partner with more oncology medical and research organizations and universities that deliver world-class care and research. For information on becoming a VA partner, contact Cancer@VA.Gov

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## National Precision Oncology Program (NPOP)

The National Precision Oncology Program (NPOP) is a national program led by the National Oncology Program Office. Michael Kelley, MD is the Director of the National Oncology Program for the VA. Dr. Sara Ahmed, PhD is the Director of Precision Oncology.

The aim of the White House Cancer Moonshot Initiative aim was to double the rate of progress against cancer. Part of VA's efforts to support Cancer Moonshot is the VA's National Precision Oncology Program which creates best practices to provide genetic testing and reporting of tumor samples from patients and documents tumor molecular results and provide advice to cancer care doctors, help doctors access matching approved, and new research therapies through clinical trials, and creates a learning healthcare system for administrative, clinical care and research purposes.

Our long-term goal is to develop a Cancer Registry with samples of cancers and cancer mutations. The samples collected may include genomics (tumor, bone marrow, or blood samples, DNA, pharmacogenetics) and different types of proteins. The samples are used to help learn genetic responses and how well current therapies, tumor-targeted therapies and immunotherapies will work on the many types of solid tumors and blood cancers.

*cancer.va.gov*





*Veterans*
WOMEN'S HEALTH

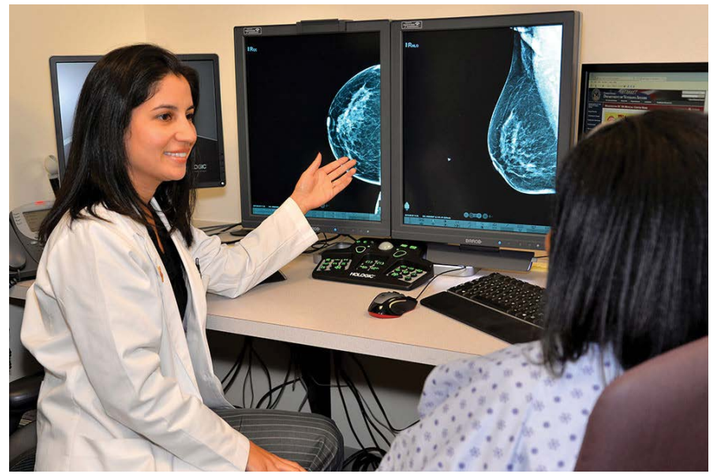
# Partnership to Enhance Breast Cancer Treatment for Veterans

By the VA Office of Media Relations

VA has launched a new strategic partnership with Duke University and Baylor College of Medicine toward building VA's National Women Veterans Oncology System of Excellence, integrating the best of the public and private sectors to serve patients.

Through a shared commitment to transform cancer prevention, treatment and outcomes while providing highly coordinated, integrated patient centered care, this partnership will recruit the nation's top breast cancer oncologists to advance and improve health outcomes for women Veterans. It will also launch new collaborative research programs.

"VA is steadfast in building bold and innovative partnerships such as this one with Duke and Baylor, which is consistent with VA's vision to address the public health crisis presented by cancer," said VA Deputy Secretary Pamela Powers.



Chief of Breast Imaging at the Washington D.C. VA Medical Center Dr. Tahira Ahmed reviews a 3D mammogram with a Veteran patient. *Photo by Gary Strange, DC VA Medical Center*

### Fighting cancer a top priority

"It is among our top priorities to fight cancer, serve our Veterans, build world class partnerships and hire innovative and well-respected cancer care professionals," Powers said.

In addition to prioritizing co-recruitment efforts, developing national tumor boards and increasing Veteran access to clinical trials, VA, Duke University and Baylor will create a multi-disciplinary steering committee for implementation of these partnerships.

The National Women Veterans Oncology System of Excellence will also partner with the National Cancer Institute, other federal agencies, academic organizations and pharmaceutical and health care technology companies. These partnerships will provide tele-oncology, decentralized clinical trials and personalized cancer care to women Veterans nationwide.

This partnership will recruit the nation's top breast cancer oncologists to advance and improve health outcomes for women Veterans. *Photo courtesy of VHA*

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*Veterans*
WOMEN'S HEALTH

# Breast Cancer Survivors, Stories of Hope

By Jennifer Roy, public affairs specialist with VA North Texas Health Care System

Tawana Bridges, Susan Rutland, Patsy Shipman-Knight and Nelda Hanson are all Veterans and patients at VA North Texas Health Care System. All five spent decades of service in uniform. And all five are breast cancer survivors.

October is breast cancer awareness month. The American Cancer Society estimates approximately 268,600 new cases of invasive breast cancer will be diagnosed in women in 2019 and another 2,670 in men. Chillingly, one in eight women will develop breast cancer in their lifetime. Many will beat cancer and serve as inspiration to those facing a diagnosis and their own personal battle.

### Everything will be fine.

In 2015, Tawana Bridges was preparing for her retirement after 20-years in the U.S. Army, but instead of preparing for a new life without deployments, uniforms, and in the middle of planning for a move to Dallas from El Paso, Bridges faced a new challenge.

"I noticed a lump on my side," said Bridges. "It was during the holidays and I can remember thinking, I'll go get it checked out and everything will be fine."

She did not get the results she was expecting. It was breast cancer. Bridges, a mother of two, quickly started chemotherapy at Dallas VA Medical Center.

"I'm thankful it was caught early," said Tawana. "I'm now three years cancer free and can't thank my VA doctors and nurses enough who took care of me."

### It was happening again.

In 1994, U.S. Navy Veteran, Susan Rutland was welcoming her 40th birthday with open arms. Instead, she would spend her birthday being wheeled into the operating room for a complete mastectomy.

Rutland had just gotten married earlier that year and was a new stepmom to three young girls. Battling breast cancer was

Dr. Soume Foshee, VA North Texas Radiologist, talks with breast cancer survivor and U.S. Army Veteran, Tawana Bridges in the mammography suite at the Dallas VA Medical Center.

U.S. Navy Veteran Susan Rutland waits with her husband outside of Dallas VA Medical Center's mammography suite for her yearly checkup.

not how Rutland imagined the first days as a new blended family would go. "I knew I needed to get better," said Rutland. "I had to get through it because I had my son and those little girls that needed me."

Rutland's diagnosis of ductal carcinoma in situ, or DCIS, was treated with a complete mastectomy. Over the next 25-years, Rutland kept up with her mammograms every six-months and eventually went to yearly checks. In August 2019, Susan arrived at the Dallas VA Medical Center for her routine screening, however this time, she did not get the results she was expecting. Cancer. Again.

Facing a second diagnosis of DCIS, she moved forward with treatment and underwent a partial mastectomy. "I was waiting for my surgery and I broke down," said Rutland. "I remember being wheeled in the back and reality hit me that this was happening all over again."

Rutland beat cancer for a second time and joined the more than 3.5 million breast cancer survivors in the United States.

"I am very positive. My son says Mom-2 Cancer-0–no doubt in my mind that I will be just fine," said Rutland.

### I am a man. How do I have breast cancer?

According to the American Cancer Society, the lifetime risk of men getting breast cancer is about 1 in 833.

U.S. Army Veteran Otis White had a 1 in 833 chance of a breast cancer diagnosis. He beat his diagnosis thanks to VA North Texas Health Care System.

Otis White worked in communications while serving in the U.S. Army and National Guard and found himself all over the world. But he never thought he would find himself inside the mammography suite at the Dallas VA Medical Center.

"One day I felt something like a knot, it was really hard, it wasn't sore or anything but thought it wasn't supposed to be there," said White. "I had a doctor's appointment in three weeks, so I thought I would just ask about it then, but then I thought no, I better just go on in as this just wasn't right."

White saw his doctor and he was sent for a mammogram and then a subsequent biopsy.

"They went in and took some of the tissue out, and about five or six days later I got the call saying it was cancer," said White. "I just thought this is crazy, I'm a man, how do I have breast cancer?"

Before White was diagnosed, he never heard of a man having breast cancer. "Gradually, I started seeing other men having breast cancer and it eased my thoughts because I wasn't the only one," said White. "My advice to other men going through this is to be strong and let them know there's nothing to be ashamed of."

### I was lucky they found it early.

Patsy Shipman-Knight wanted to join the Army at 18, but her parents told her no and she listened. At 32, Shipman-Knight still wanted to serve her country and travel, so she made the decision to enlist. She left for bootcamp and was sent to Germany. She describes herself as the mother hen who kept all the young soldiers out of trouble.

U.S. Army Patsy Shipman-Knight, beat breast cancer in 2016 thanks to VA North Texas Health Care System.

Shipman-Knight is now 72-years old, and a few years ago, she was diagnosed with breast cancer at the Dallas VA Medical Center during a routine mammogram.

"I was lucky they found it early," said Shipman-Knight. "Mammograms are so important and that's how my cancer was caught."





Shipman-Knight family has been her support system and have kept her spirits high.

"I was really upset when they told me it was cancer–I cried," said Shipman-Knight. "The staff is taking very good care of me. I love every one of them. Once in a while my cheerful smile would go away, but I remain positive and it always comes back."

### It just didn't seem real.

Nelda Hanson is in her fifth year in remission and enjoys her days fishing on the lake, but this U.S. Army Veteran was diagnosed with stage 3 breast cancer with a very aggressive tumor in 2014.

"When the doctor said those words, you have cancer, it was like I was playing a game," said Hanson. "It just didn't seem real."

Hanson brought her older brother with her to her appointment that cold day in December as he was her support system and also a minister.

U.S. Army Veteran Nelda Hanson battled breast cancer at the same time her husband of 40-years waged his own war with cancer. She recently celebrated five years of remission thanks to VA North Texas Medical Center.

The American Cancer Society estimates approximately 268,600 new cases of invasive breast cancer will be diagnosed in women in 2019 and another 2,670 in men.

Chillingly, one in eight women will develop breast cancer in their lifetime. Many will beat cancer and serve as inspiration to those facing a diagnosis and their own personal battle.

The doctor told Hanson is was good that it had been caught in time.

"There should never be any excuse to forget to schedule a yearly mammogram," said Hanson. "If your primary care physician forgets, remind them that you need to get it done."

VA recommends women get yearly mammograms by age 45 and every other year beginning at age 55.

In a tragic twist of fate, as Hanson was waging her own war with breast cancer, her husband was also battling his own cancer.

"I beat breast cancer but lost my husband of 40-years to his fight with cancer," said Hanson. "I'm a survivor, that's for sure."

### Early detection and human nature.

Early detection is the key to beating breast cancer. VA North Texas does some 6,000 mammograms per year, with 1-2 breast cancer diagnoses per month. Two of those Veterans diagnosed per year will be men.

Resilience, hope, technology and empathy give these Veterans a way forward when life throws cancer at them and those they love.

"I'm grateful for the experience here as the Veterans teach you a lot about the human spirit," said Dr. Soume Foshee, VA North Texas Radiologist. "They are put up against a lot of struggles in life and yet they help each other out. I feel I get as much from them as they get from me as their physician."

*va.gov*

*Veterans*
EPILOGUE

# Heroes Among Us

By Tom Adams, Publisher of Armed Forces Medicine

This year's edition of Armed Forces Medicine is incredibly meaningful to me. Not only does it recognize the 75th anniversary of the United States Veterans Health Administration, but it also marks our 20th anniversary of producing our journal for both the VA and Military healthcare communities.


I am very proud to be a part of recognizing and honoring individuals from these communities, whom faithfully serve the medical needs of our soldiers and Veterans and their families. And in every edition we have produced, it stands clear that the common theme of those we profile has been to place the needs of our soldiers and Veterans above their own needs, and at times even above their own safety.

This noble dedication is exemplary and exists throughout every level of care. And while there have been many incredible times of challenge over the past 75 years, the most recent pandemic has become the greatest of distinction. Seeing our Military and VA healthcare system provide not only for their own, but also aid the needs of all Americans through the private sector as it became overwhelmed with patients, shows me the real

quality of these wonderful people whom are truly deserving of being called heroes.

I see a real appreciation by our Military and VA caregivers for the soldiers and Veterans they serve, and a real desire to provide them the highest level of care possible. I see this at every level, from leadership making tireless effort to provide the best resources and technology for their staff, to the staff utilizing these tools while implementing compassion equally for every patient they see. Constant strive for improvement by producing the highest level of care quality for those truly deserving, those that stood for and continue to stand for our freedom both here and throughout the world. This has been extremely moving for me to witness and recognize within our publications.

Thank you to everyone in the United States Military and VA healthcare community. You are truly among the finest and most dignified individuals of our nation. It is with thanks to God for the goodness within you that I pray for your continued safety and prosperity, now and for the next 75 years!

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