



**U.S. ARMY**

# AT THE FOREFRONT OF MEDICINE

ADVANTAGES OF A  
CAREER IN U.S. ARMY  
HEALTH CARE





# IT'S AN EXCITING TIME TO WORK IN HEALTH CARE

Constantly evolving technologies and new challenges require physicians, nurses, dentists and other providers to be nimble, steadfast and innovative.

Tomorrow's medical professionals are charting new ground and have the opportunity to shape the future of medicine. And, there are several ways they can do it—join a private practice, work in a hospital system, become an educator, or even conduct academic research. But many medical students, residents and others pursuing health care careers don't realize there's one place where they can do it all, or whichever they choose: the U.S. Army health care team.

Yes, U.S. Army Medicine.

It is a world-class health system and medical research leader, dedicated to expanding the horizons in medicine from advanced techniques in patient care to breakthroughs in infectious disease and vaccine development. Where more than 12,000 uniformed health care professionals in nearly 90 specialties have meaningful careers with substantial professional, personal and financial rewards. In a time of great change, the Army offers the best of both worlds: competitive pay and benefits combined with a collegial, evidence-based, empowering practice environment steeped in innovation and leadership.

In the following pages you will meet members of the U.S. Army health care team, learn about the benefits of a career in Army Medicine, and visit some of the institutions and infrastructure that make the Army a leader in medical innovation.

## BUT FIRST, DID YOU KNOW?



The Army's Health Professions Scholarship Program (HPSP) helps students graduate debt-free by covering their tuition and other costs of school.



Army service offers high-quality clinical experience and opportunities for professional development, including subspecialization, global work, humanitarian missions, and medical research.



In 2013, Thomson Reuters named the Army one of the world's top 100 innovators for earning more than 300 patents in science, technology and medicine over a three-year period.<sup>1</sup>

# SPOTLIGHT ON...

## MAJ. JENNIFER SABINO, MD

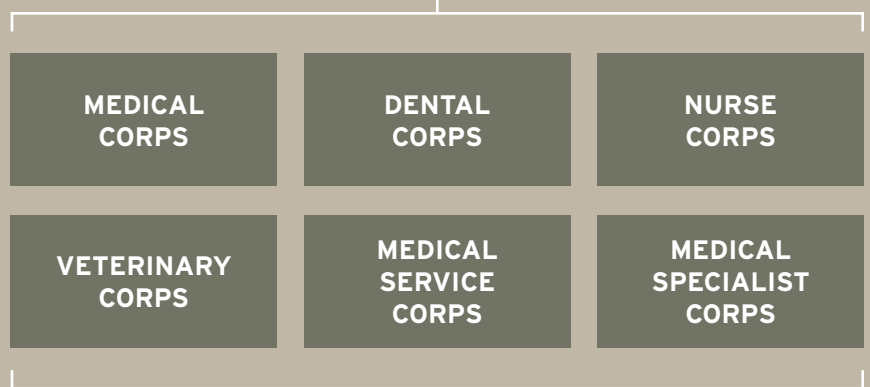
Maj. Jennifer Sabino, MD, is taking full advantage of her Army service. A trailblazer by nature, she was the first person in her family to study medicine or join the military. After graduating from the U.S. Military Academy at West Point with a degree in Engineering Physics, she earned her medical degree at the Yale School of Medicine. "My classmates from Yale are still paying off their loans," said Maj. Sabino. "Because the Army's Health Professions Scholarship Program paid for my school, I didn't have any debt, so I was able to buy a house right out of medical school."

As a general surgery resident at Walter Reed National Military Medical Center, Maj. Sabino gained the confidence to be a leader in the operating room as well as among her peers. She presented her research at the American College of Surgeons' Clinical Congress and at medical meetings abroad. After finishing her residency in 2014, Dr. Sabino was accepted into the plastic surgery fellowship at Johns Hopkins University. "I've never felt like the Army held me back from pursuing my goals," she said. "In fact, my mentors at Walter Reed Bethesda have encouraged me to reach high."

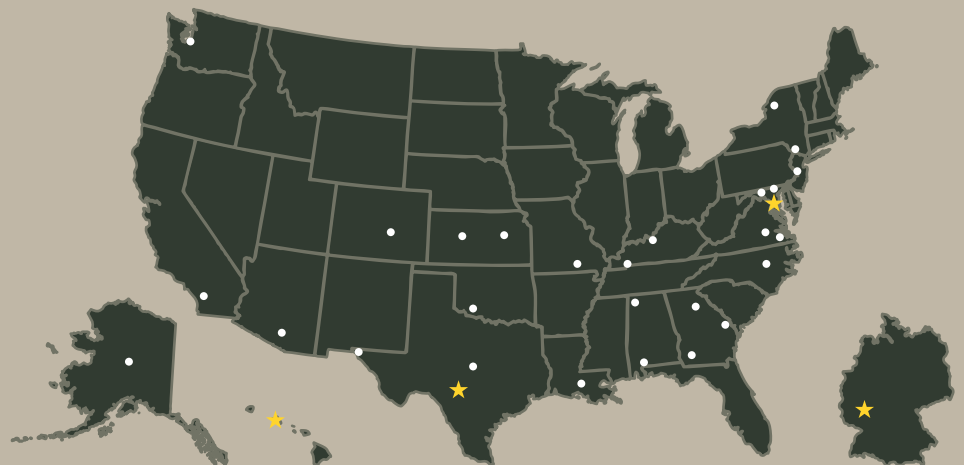


# U.S. ARMY HEALTH CARE AT A GLANCE

## SURGEON GENERAL



12,000 UNIFORMED OFFICERS



- ★ REGIONAL HEALTH COMMANDS
- CLINICS AND OTHER ARMY FACILITIES

GERMANY



# WHAT A CAREER IN ARMY HEALTH CARE OFFERS YOU

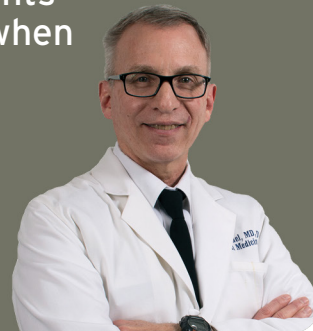
Everyone has their own motivation to commission as an Army Medicine (AMEDD) officer.

Some people have a family history of service, but many Army nurses, doctors, veterinarians, dentists, psychologists, podiatrists and other specialists don't know anyone serving in the Army when they join. What typically attracts them are unique opportunities for career development, financial incentives, being part of a team and the chance to contribute to a cause bigger than themselves.

Is Army service right for you? Here are some important considerations and examples of Army health care professionals making the most of their careers:

“ I only had a three-year commitment, but at the third, and then sixth year of my service—despite being recruited to civilian medicine—I decided I had a better opportunity to really impact Soldier health and world health by staying in the U.S. Army. I have spent my career at the Walter Reed Army Institute of Research doing science and medicine. I still see patients and I remain, at age 59, as happy as I was when I joined the military quite some time ago.”

**COL. NELSON MICHAEL, MD, PhD**  
Director, U.S. Military HIV Research Program (MHRP),  
Walter Reed Army Institute of Research







## FOCUS ON PRACTICING MEDICINE, NOT RUNNING A BUSINESS

Army providers spend their days focused on what they were trained to do—treat patients to the very best of their abilities. They don't have to worry about the headaches of patient billing, overhead, malpractice insurance or the patient's ability to pay.

On the Army health care team, you can chart your own professional path. That could mean pursuing a subspecialty, becoming a leader or an educator, or taking part in humanitarian and training missions. It could mean sticking close to home, or traveling the world to take care of patients or conduct global health research.

**Col. Eugene Soh, MD, FACC**, is a cardiologist at Walter Reed National Military Medical Center in Bethesda, Md. In 2015, he introduced a minimally-invasive, heart-valve replacement procedure at his hospital, which has reduced the need for the more invasive, open heart surgery option.<sup>ii</sup> He is excited about his ability to spearhead change and ensured his cardiology team gained proficiency in the procedure through simulation training before performing it on live patients.

**Col. Todd Villines, MD, FACC**, also a cardiologist, could be described as having “four careers in one.” First and foremost, he is a clinician with a focus on the use of imaging to diagnose heart disease. He is also an educator; as the Walter Reed Bethesda fellowship program director, he oversees the training of more than half of the new cardiologists in the Army. Wearing yet a third hat, he leads medical research studies in his hospital.

Finally, in his role as the Cardiology Consultant to the U.S. Army Surgeon General, he is a leader who advises the Surgeon General on cardiology issues and helps set policy.

## BE A LEADER

Leadership skills are increasingly sought after by employers and professional societies, and the Army is committed to providing classroom education in the theory of leadership, as well as practical team leadership experience for officers in all six health care Corps.<sup>iii</sup>

Army providers can also become administrators and lead large organizations. Many former Army medical officers go on to become educators and leaders around the country.

## LEARN MORE:



### VIDEO

Col. Eugene Soh, MD, FACC



### VIDEO

Col. Todd Villines, MD, FACC



## STAY AT THE FOREFRONT OF TECHNOLOGY

Today's modern Army Medicine is a far cry from scenes of the old TV series, M\*A\*S\*H – treating Soldiers in a tent with tools that are basic and even verging on inadequate. Army hospitals and clinics are state-of-the-art facilities and well-equipped with advanced technology. Army Medicine officers, like most practicing health care professionals, stay current on research and evolving technology and therefore find it easy to transition to civilian practice following completion of their service.

**Maj. Nicolas Cahanding, DO**, is Chief of Interventional Radiology at Brooke Army Medical Center in San Antonio, Texas. His first passion in medicine was using imaging for diagnostics, but over time he has grown to value interaction with his patients just as much. One of the minimally invasive procedures he performs on patients with liver cancer is radioembolization, in which radioactive particles are delivered to the organ through the blood stream to destroy the cancerous tissue.<sup>iv</sup>



### VIDEO

See Maj. Cahanding in action:  
High-Tech, High-Touch Cancer Care

## GRADUATE DEBT-FREE

Many people first consider Army health care as a way to pay for their education. The cost of medical school can easily exceed \$200,000.<sup>v</sup> The Army's Health Professions Scholarship Program (HPSP), loan repayment and special pay programs (eligibility varies)<sup>vi</sup> help defray the cost of tuition, books and fees, and allow many health professionals to finish their degrees debt-free.

Once in practice, AMEDD officers are reimbursed for continuing education and the cost of subspecializing or acquiring additional credentials.

## ARMY HEALTH PROFESSIONS SCHOLARSHIP PROGRAM (HPSP) QUICK FACTS\*



Full tuition scholarship plus a **\$20,000** signing bonus



Monthly stipend of more than **\$2,200**



Available to students pursuing advanced degrees in medicine, dentistry, veterinary science, psychiatric nursing, optometry or psychology



Covers required books, equipment and most academic fees

\*HPSP benefits subject to eligibility.

**Maj. Ezella Washington, DO**, a family medicine physician, heard about HPSP from a friend when she was in medical school. Now she volunteers to speak at colleges in her spare time, mentor and share information about Army opportunities with students considering medical school.



### VIDEO

Watch Maj. Washington's story:  
Educational Opportunities





Officers' Training Corps (ROTC) student at George Mason University, she continued her education through several Army programs, including a four-week Nurse Summer Training Program at Tripler Army Medical Center in Honolulu, a leadership course and a six-month training program to prepare her for work as a medical-surgical nurse.

But her life does not revolve only around work. She says, "I work hard while I'm at work and then...work out and go to church and be with my family... all of that is going to make me be a better Soldier and a better nurse."

Army health care offers lucrative benefits, including low-cost or no-cost medical, dental and life insurance, generous retirement plan options, housing allowances and 30 days of paid vacation

earned annually. Time to enjoy family and friends is an important part of the Army experience.

## TRAVEL THE WORLD

U.S. Army hospitals and clinics are found across the country and around the world (including Alaska, Hawaii, Japan, South Korea, Italy and Germany). AMEDD officers have a choice in how often they move and where they live. For many, joining the Army is a chance to see the world. But for those who prefer to put down roots, extended stays in one location may be an option too.

Short-term humanitarian, disaster relief and training missions are another way you may apply your skills overseas. For example, in 2016 the U.S. Army Reserve 185th Dental Company based in Garden Grove, Calif., traveled to Guatemala for a two-week humanitarian mission to bring its dental skills to more than 1,000 local residents.

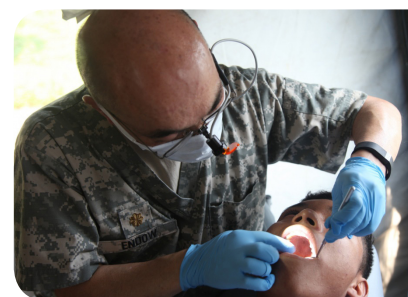
"Some of our patients in Guatemala have never had a dental checkup," one of the participants told *Dentistry Today*.<sup>vii</sup> "The amount of gratitude and fulfillment you receive is overwhelming."

## ENJOY WORK-LIFE BALANCE

1st Lt. Katie Von Fange, RN, was chosen Nurse of the Year at Brooke Army Medical Center in 2015, and she takes her work seriously. After graduating as a Reserve

## SERVE YOUR COUNTRY

As a member of the Army's health care team you serve your country by caring for Soldiers, retired service members and their families. In fact, the desire to serve and duty to country were cited as motivating factors for joining Army Medicine by more than half of its members.<sup>viii</sup>



## LEARN MORE:



**VIDEO**  
Life of an Army Nurse



**BLOG**  
Work-life Balance in Army Medicine



# A CULTURE OF INNOVATION

The nature of Army Medicine’s mission and infrastructure supports important research and innovation.

Specialized research institutes and a global network of partner institutions support the Army’s efforts to address complex medical challenges and break new ground in areas such as vaccine development, surgery and regenerative medicine. This foundation, along with a culture that encourages clinicians to publish in peer-reviewed journals, makes innovation a vital part of many Army officers’ health care careers.

## SPECIALIZED RESEARCH INSTITUTES

Within Army Medicine, specialized medical research institutes are dedicated to finding solutions to important military health questions. Depending on one’s interests and skills, an Army health care officer may be assigned to spend a few years at one of these institutes. Most of the research done is applied, so Army clinicians and their patients see direct benefits from their work. The institutes spark new products, processes and best practices that lead to better care for Soldiers and their families—and oftentimes translate to advancing civilian medicine.



**WALTER REED ARMY INSTITUTE OF RESEARCH**  
Infectious Diseases, Brain Health



**U.S. ARMY MEDICAL RESEARCH INSTITUTE OF CHEMICAL DEFENSE**  
Medical Chemical Countermeasures



**U.S. ARMY RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE**  
Soldier Health and Performance Optimization



**U.S. ARMY MEDICAL RESEARCH INSTITUTE OF INFECTIOUS DISEASES**  
Medical Biologic Defense, Vaccine Development



**TELEMEDICINE AND ADVANCED TECHNOLOGY RESEARCH CENTER**  
Health Informatics, Telemedicine/m-Health, Training and Biology



**U.S. ARMY INSTITUTE OF SURGICAL RESEARCH**  
Surgical/Critical Care





to plan missions at various altitudes on their smartphones. Someday perhaps this app will be available for download to anyone planning a mountain ascent.

### Healthy Families, Healthy Forces

During deployments the Army has some control over what and how much Soldiers eat, but poor choices at home can lead to excess weight and health risks.

“A healthier home space could positively impact the health of the Soldier,” says **Lt. Col. Asma Bukhari, RD**, a research dietitian. To study barriers to healthy eating and the effectiveness of different weight loss strategies in military families, in 2015 USARIEM launched *Healthy Families, Healthy Forces*, a randomized trial, which Bukhari leads in collaboration with investigators from Tufts University.

*Healthy Families, Healthy Forces* teaches participants how to plan menus, shop for groceries, self-monitor weight, diet and activity, and change lifestyle habits sustainably for long-term benefits.<sup>xi</sup> If the study is successful, the learnings will be applied to an expanded program for Army families nationwide.

### A CLOSER LOOK: SUPPORTING SOLDIER PERFORMANCE

Soldiers’ missions can take them around the world – to the desert, the tropics, and other extremes of altitude, heat and cold. The U.S. Army Research Institute of Environmental Medicine (USARIEM) located in Natick, Mass., helps Soldiers succeed in any environment, through its dedication to optimizing Soldier physical and cognitive performance.

USARIEM’s physical therapists, dietitians, physician assistants and other health care specialists study how nutrition, activity, environment and other variables affect human performance. A unique set of climatic<sup>ix</sup> and hypobaric chambers allows volunteers who participate in some studies to experience an environment that simulates the summit of Mount Everest.

#### High Climbs

USARIEM’s Division of Thermal and Mountain Medicine studies the effects of high altitude, including Acute Mountain Sickness and the process of acclimatization. One outcome of this research is the Altitude Readiness Management System (ARMS)<sup>x</sup> app, which Special Forces commanders use

### GO IN-DEPTH:



**VIDEO**  
Maj. Richard Westrick



**VIDEO**  
USARIEM



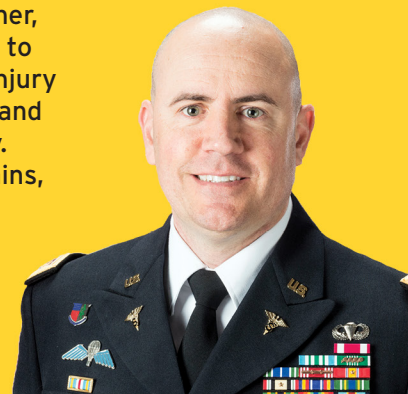
**WEBSITE**  
USARIEM

## SPOTLIGHT ON...

After earning his Doctor of Physical Therapy (DPT) at the Army-Baylor University doctoral program in Physical Therapy (ranked #8 in the nation by U.S. News in 2016<sup>xiii</sup>), Westrick was selected for the school’s Sports Physical Therapy Doctor of Science fellowship (DSc) at the U.S. Military Academy at West Point. It was while fulfilling the fellowship’s clinical research requirement that he discovered his passion for research, eventually joining the faculty at West Point.

**MAJ. RICHARD WESTRICK, DPT, D.Sc.**  
Deputy Chief, Military Performance Division, USARIEM

In his current role as a full-time researcher, Westrick’s focus is to develop strategies to mitigate musculoskeletal injury and re-injury through screening and prediction tools, and to train Soldiers in how to prevent injury. “Soldiers are tactical athletes,” he explains, “so our approach to musculoskeletal injury is very similar to the way we would treat collegiate or professional athletes.”





Obviously, not every health care provider in the U.S. Army is a researcher. In fact, even researchers, like Maj. Westrick, see patients in addition to conducting their studies.

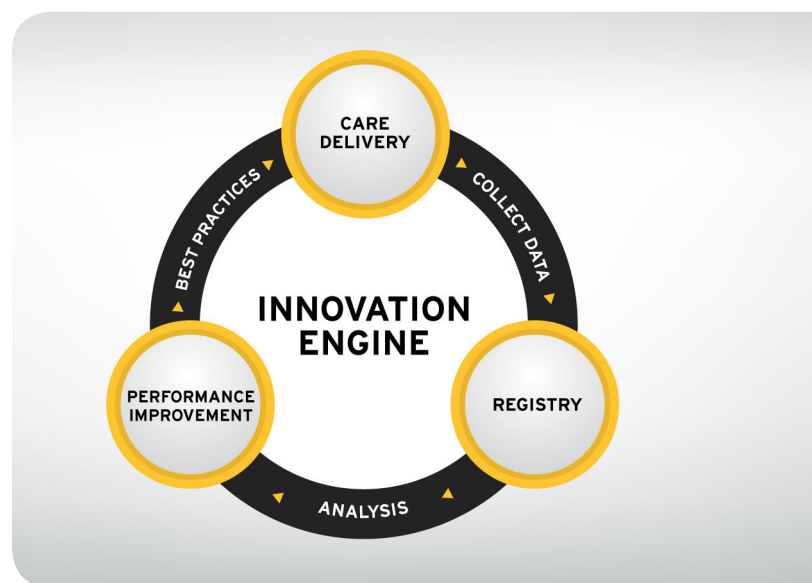
However, the Army strongly supports health care officers who wish to advance medicine in Army Medical Centers, community hospitals and clinics around the world. For example:

- Army health care officers at all levels contribute to peer-reviewed papers in respected journals.
- Army clinicians author chapters, draft clinical guidelines, hold leadership positions in their professional associations and in other ways contribute to advancing science and medicine.
- Robust, centralized data and tissue registries make research accessible to providers across the network.

### A CLOSER LOOK: VIRTUOUS CIRCLE OF SURGICAL RESEARCH

The trauma registry housed at the U.S. Army Institute of Surgical Research contains comprehensive data from more than 176,000 trauma records, making it the largest such database in existence.

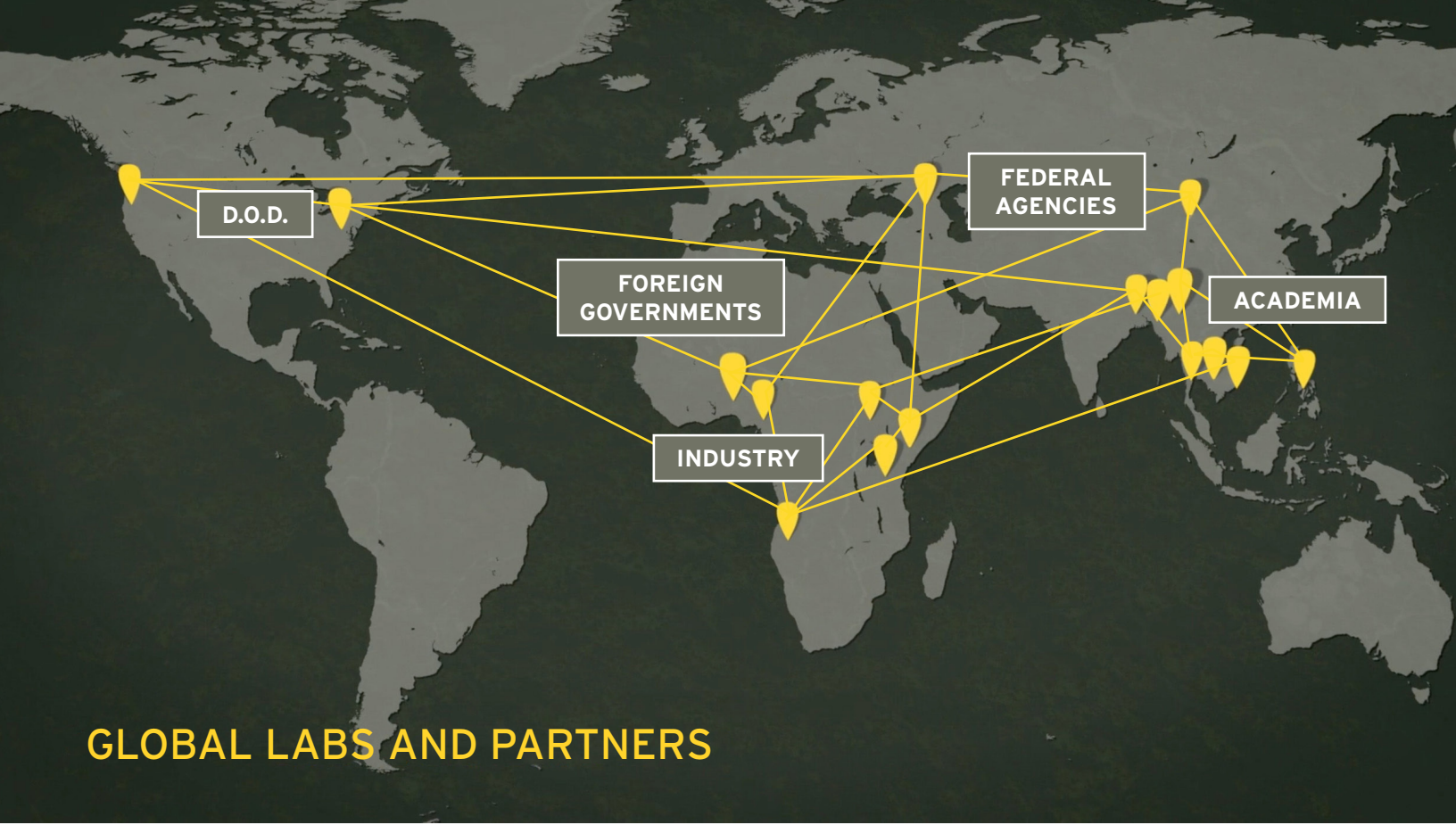
More than 700 researchers, surgeons, nurses and civilian scientists in the U.S. and around the world take part in weekly video conferences to continuously advance surgical



techniques and technologies. The registry is a high-quality source of information that can be accessed for performance improvement, to develop new products and test treatment hypotheses.

The data is also used to develop clinical guidelines that are disseminated across the Army network, leading to better, evidence-based care for Soldiers, their families and eventually civilians.





## GLOBAL LABS AND PARTNERS

### GLOBAL NETWORK

U.S. Army hospitals, research centers and health care specialty groups collaborate with a vast network of partners to achieve their goals:

- U.S. military and foreign organizations
- Other U.S. federal agencies
- Scientific research institutes
- Universities and academic medical centers
- Multinational corporations
- Non-governmental organizations (NGOs)
- Local schools and clinics

### A CLOSER LOOK: DEVELOPMENT OF THE ZIKA VACCINE

The Walter Reed Army Institute of Research (WRAIR) oversees the U.S. Army’s international network of medical research laboratories in Kenya, Thailand and the Republic of Georgia<sup>xiii</sup>. The labs play an important role in detecting emerging disease threats, such as malaria, Zika, Ebola, HIV and dengue.<sup>xiv</sup> While the immediate goal is to protect American troops all over the world, the work these labs do has contributed to saving the lives of millions of civilians worldwide.

Since 1901, when U.S. Army Maj. Walter Reed proved that yellow fever is transmitted by mosquitoes, WRAIR has developed an unmatched expertise in flaviviruses, including the development of vaccines that use the inactivated (dead) form of the virus. U.S. Army physician/scientists work side-by-side with more than a thousand civilian scientists on vaccine development and testing.

In an interview, **Col. (ret) Stephen Thomas, MD**, recent Zika program lead at WRAIR, said WRAIR “started to conceptualize the development of the Zika vaccine” a few years ago when lab partners conducting bio surveillance in Southeast Asia spotted outbreaks of the disease that resembled dengue in Southeast Asia and French Polynesia.<sup>xv</sup>

In 2016, WRAIR developed a Zika Purified Inactivated Virus (ZPIV) vaccine and brought it to human trials in just six months. Vaccine development under ordinary circumstances can take as long as a decade.

Thomas and his colleagues at WRAIR collaborated with researchers at Beth Israel Deaconess Medical Center, the University of Sao Paulo, Saint Louis University, and the Ragon Institute, MIT/Harvard to show the vaccine’s effectiveness. Their findings were published in the world’s most prestigious journals.<sup>xvi xvii</sup>



# MILESTONES IN WRAIR'S INVESTIGATION OF OTHER DEADLY INFECTIOUS DISEASES

HIV / AIDS



In 2009, landmark results were published about RV 144, the first HIV vaccine regimen to show partial efficacy against HIV infection.<sup>xviii</sup> The Military HIV Research Program at WRAIR continues to break new ground in its quest for an HIV vaccine and to identify early HIV infection to eventually provide a cure.



**60%**  
DROP IN  
FATAL  
MALARIA  
CASES

MALARIA

U.S. Army researchers have made important contributions toward the decrease in fatal malaria cases since 2000.<sup>xix</sup> WRAIR's work includes a 15-minute, rapid malaria diagnostic test<sup>xx</sup> and the world's first effective malaria vaccine, RTS,S.

EBOLA



WRAIR helped implement the U.S. Government's response to the 2014 Ebola outbreak in West Africa.<sup>xxi</sup>

ANTIBIOTIC-RESISTANT BACTERIA

In 2016, WRAIR's Multidrug-resistant Organism Repository and Surveillance Network (MRSN), identified a superbug resistant to colistin, known as the "antibiotic of last resort." The bacteria contained a gene (mcr-1), which is dangerous in two ways: it's resistant to colistin and it's highly mobile, able to jump from one strain of bacteria to another. "The discovery of this gene in the U.S. shows why it is so important to identify reservoirs of it so we can help prevent its spread," said Lt. Col. Kate Hinkle, MD, director of MRSN and a co-author of the study.<sup>xxii</sup>



## GO IN-DEPTH:



**VIDEO**  
Race for the Zika Vaccine:  
The Army Advantage



**WEBSITE**  
Military HIV  
Research Program



**VIDEO**  
Milestones: U.S. Army vs.  
Infectious Disease



**WEBSITE**  
WRAIR

What puts the Army and the Walter Reed Army Institute of Research in a position to be successful in developing a Zika vaccine and similar endeavors is our global reach. For over half a century, we've had clinical research platforms in places where these diseases circulate. And we have had the benefit of working with host nations and their scientists and their physicians to truly understand the nuances of these viruses, and how to make countermeasures against them."

**COL. (RET) STEPHEN THOMAS, MD**  
recent Zika program lead at WRAIR







## WHERE WILL YOU TAKE YOUR CAREER?

The Army is one of the largest and most innovative health care organizations in the world. It has modern facilities and world-class research capabilities, offers high quality care, cutting-edge treatments and advances in medical science in numerous fields. Many of the things you can do in Army Medicine, you can't find just anywhere. Is Army health care right for you?

To explore the possibilities or speak with a recruiter, visit [healthcare.goarmy.com](https://healthcare.goarmy.com).

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