UNIFORMED SERVICES UNIVERSITY

2021 | Annual Report

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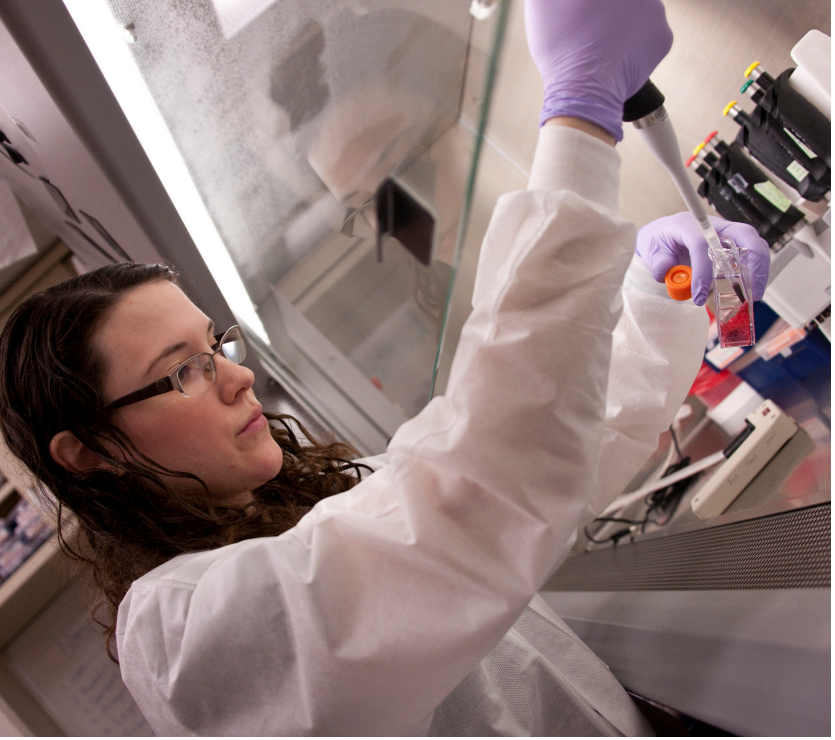


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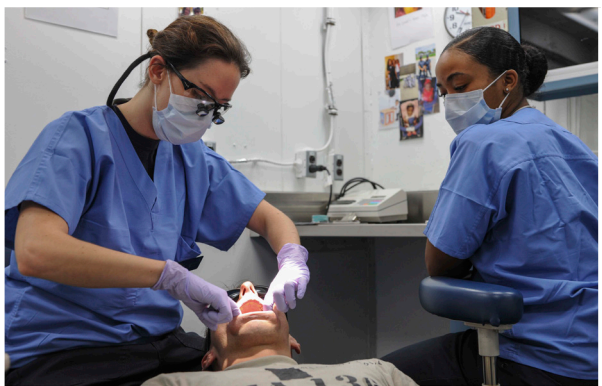


A Letter from our President

The past year has been marked by challenge, but also by significant achievement. As we reflect on 2021, we have many reasons to celebrate our accomplishments.

In 2021, the flexibility, ingenuity and persistence of our faculty and staff kept our education mission going strong in the face of the COVID-19 pandemic. I am also deeply grateful to the many support elements and professionals who helped make the work of the schools, colleges, centers and Institute possible. Despite the continued challenges, every branch of USU demonstrated enormous growth through their distinguished achievements.

Our researchers continued to advance our important scientific efforts, and those efforts have not gone unnoticed. USU faculty, staff and students have been lauded for their research contributions as recipients of numerous awards including Military Health System Research Symposium Awards, the prestigious Federal Laboratory Consortium's Award for Technology Transfer, and countless other commendations representing a wide range of research topics and diverse teams.

2021 was also marked by significant milestones. Our Armed Forces Radiobiology Research Institute celebrated 60 years of accomplishments as a unique national asset, our Graduate School of Nursing was named a Center of Excellence for the second consecutive year by The National League for Nursing Board of Governors, and Dr. Dale Smith, who taught medical history for more than 40 years to more than 9,000 medical students and over 1,000 other professionals at USU, retired at the end of August after an illustrious career.

While these are but a snapshot of the successes, achievements, and changes of USU, and of USU's personnel, this year, they are emblematic of an incredibly dedicated and devoted university team, and a high-performing organization advancing our mission of readiness with the utmost distinction.

I am truly honored to serve this team and excited to share the year's accomplishments with each of you.

Sincerely,

William M. Roberts, MD, MBA
Acting President, USU

Dean Introductions

Eric Elster, MD, FACS, FRCSEng (Hon.)

Captain, Medical Corps, U.S. Navy (Ret.)
Dean, School of Medicine

Every medical student who enrolls at USU's F. Edward Hébert School of Medicine (SOM) — whether entering straight out of college or following years of military service — is commissioned an officer in one of the School's four sponsoring services. USU's "Molecules to Military Medicine" curriculum is crafted to cover the same scientific concepts and clinical skills that civilian medical students learn, and much more. Unlike other medical students, USU students receive more than 700 additional hours of supplemental training in military medicine, tropical diseases, combat casualty care, humanitarian assistance, ethics and other military-relevant topics and skills.

Carol Ann Romano, PhD, RN, FAAN

Dean, School of Nursing

In 2021, the Daniel K. Inouye Graduate School of Nursing (GSN) enhanced its commitment to provide the nation with the highest quality advanced practice nurse clinicians, scientists, scholars, and leaders dedicated to federal service, health readiness, and global engagement. The vision of transforming military and federal health through advanced nursing practice, scholarship and science is being realized. Through the pillars of education, scholarship and leadership the GSN produces expert nursing leaders to support the federal health mission, readiness, and global engagement, and has received multiple national recognitions of excellence for that work.

The past year has presented the continued challenges of the war on COVID-19, and the volatile, uncertain, complex and ambiguous nature of our changing world. We celebrate the numerous leadership and service activities, and the awards and recognitions bestowed on our esteemed faculty who ensure that we produce a qualified and well-prepared next generation of military clinicians, scholars and leaders. We are honored to be part of a vibrant University that melds a traditional health science curriculum with a strong military mission to prepare tomorrow's health leaders who will care for our warriors and their families. The professionalism, productivity and impact reflected in this 2021 annual report inspires the Graduate School of Nursing to continue to serve our nation with excellence.

Lula Pelayo, PhD, RN, FAAN

Dean, College of Allied Health Sciences

The year 2021 was eventful for the College of Allied Health Sciences (CAHS). Amid COVID-19, we continued to operate at full force. We noticed an increase in not only student attendees, totaling 3,507 with an average daily census of 2061, but in graduates. Nineteen different majors out of our 23 programs were represented in degree achievements, 12 with Associate of Science Degrees in Health Sciences, three majors with both Associate and Bachelors of Science in Health Sciences, and four with the Bachelor's degree. This totaled 669 graduates in 2021, up from 259 in 2020.

Our faculty development efforts paid off, as we continued to keep our essential personnel up-to-date on CAHS administrative processes, including operations, duties, and responsibilities of appointed CAHS faculty members. We also continued to provide faculty with support with program transitions, facilitating course and syllabi preparation.

Since its inception in 2017, the CAHS has enrolled more than 9,000 students in 23 programs offered at seven locations across the U.S., representing all components of the Army, Navy, Air Force, and Coast Guard. Despite the pandemic, CAHS has also maintained nearly 1,000 semester hours of curriculum, which documents the allied health education received by our students as they support our nation and the Department of Defense. The CAHS remains dedicated to recognizing and supporting the academic achievement of military service members during their enlistment.

Drew W. Fallis, DDS, MS

Colonel, U.S. Air Force, Dental Corps (Ret.)
Executive Dean, Postgraduate Dental College

This year was an exceptional year for the Postgraduate Dental College (PDC), despite challenges we all continued to face during the pandemic. The school saw a 100 percent program accreditation rate, a 96 percent Master of Science in Oral Biology degree graduation rate, and a 92 percent National Board Certification rate on first attempt by its students. In addition, the PDC also established and initiated a Dental Long-Term Career Outcomes Study (D-LTCOS) to track longitudinal data of PDC students, faculty, and alumni for future dental educational research. Among numerous other accomplishments in 2021, PDC also signed an affiliation agreement with The Ohio State University College of Public Health for collaborative research.

Year-in-Review

January

CAHS Achieves Significant Milestones

2021 was a busy year for the CAHS. In January, the College initiated a review and assessment of the Sub-alternate Independent Duty Corpsman and Radiation Health, and proposed additions to the CAHS catalog. These Navy Medical Forces Support Command programs are offered at the Navy Undersea Medical Institute, in Groton, Connecticut. February included meetings with the USAF Paramedic Program Manager, discussing the feasibility of USU becoming the institutional sponsor for this program. These discussions also included use of National Standard Curriculum, accreditation, credentialing, faculty qualifications, and need for a Service Request/Substantive Change Request to Middle States to implement a request/Memorandum of Agreement.

Additionally, the CAHS continued its collaboration with the Special Operations Center of Excellence and the Joint Special Operations Medical Training Center (JSOMTC), Fort Bragg, North Carolina. Memoranda of Agreement, with resourcing documents led to the establishment of the JSOMTC as an Other Instructional Site with the Middle States Commission on Higher Education. In March 2021, the CAHS was notified that the Joint Special Operations Medical Training Center was granted Additional Location status. This designation allowed the CAHS to offer more than 50% of the technical portion of the degrees at the site. In 2021, JSOMTC enrolled 189 students, from both the Army and Navy, into the two programs offered, the Emergency Medical Services-Paramedic Associate of Science in Health Sciences and the Advanced Tactical Provider Bachelors of Science in Health Sciences.

January 28

USU Researchers Earn Prestigious Tech Transfer Award, Marking 7th Federal Lab Consortium Win for University

University researchers working on a new gamma radiation vaccine development platform were recognized for their efforts, earning the prestigious 2021 Federal Laboratory Consortium's Award for

Technology Transfer, making it the university's seventh consecutive year receiving the award.

Dr. Michael J. Daly, professor of Pathology at USU, was selected for the FLC Tech Transfer Award for his work "Novel Vaccine Production Using Unique Technology Derived from Radiation-resistant Bacteria."

The FLC is the congressionally-mandated organization that educates, promotes, and facilitates federal technology transfer. The Excellence in Technology Transfer Award is presented annually to lab employees, representing more than 300 federal labs supported by the FLC, who have accomplished outstanding work in the process of transferring federally-developed technology. Dr. Michael J. Daly, professor of Pathology at USU, was recently selected for the FLC Tech Transfer Award for his work "Novel Vaccine Production Using Unique Technology Derived from Radiation-resistant Bacteria."

February 9

President Biden Names USU Nursing Alumna as Acting U.S. Surgeon General

President Joe Biden filled key administration position at the start of his term. While awaiting Senate confirmation on Dr. Vivek Murthy as U.S. Surgeon General, and who has been nominated for the post again. While waiting Senate confirmation on Dr. Vivek Murthy as U.S. Surgeon General, the President appointed U.S. Public Health Service Rear Adm. Susan Orsega to bridge the gap as the nation's top healthcare advisor. Orsega, who graduated from the GSN in 2001, was director of the 6,100-officer U.S. Public Health Service (USPHS) Commissioned Corps. She was responsible for overseeing the personnel, operations, readiness, deployment and policies pertaining to the USPHS Commissioned Corps.

February 18

Order of Military Medical Merit Presented to USU Medical Student

Army 2nd Lt. Alex Villahermosa recently became the first USU medical student to ever receive the Order of the Military Medical Merit, or O2M3, presented by the Army Medical Department (AMEDD) for significant contributions to the Regiment. A surprised and humbled Villahermosa was recognized for his achievements during a small ceremony at USU on Feb. 11.

Villahermosa was recognized for his contributions as a senior non-commissioned officer and medical sergeant. While serving with a medical operations unit, Villahermosa developed 21 advanced medical courses. He also wrote the U.S. Special Operations Command's Advanced Tactical Paramedic exam, as well as Tactical Medicine Emergency Protocols. These training programs supported AMEDD missions worldwide, and have enhanced proficiency, trauma protocols, and technical rescue skills of medical personnel.

“I’ve loved serving in the military and being in military medicine as an NCO and as a medical student about to graduate … I’m really grateful for the opportunities I’ve been given and that’s something I hope to pay forward for the rest of my career and maybe even after.”

– Army 2nd Lt. Alex Villahermosa

February 19

IDCPR Leads DoD Participation in STORM CHASER Study

STORM CHASER, which stands for Study To Optimally Reduce Morbidity in Care Homes And Sites with Enhanced Risk, kicked off its third phase in early 2021, seeking to find out whether COVID-19 could be prevented in those who have recently been exposed to the SARS-CoV-2 infection by administering an intramuscular monoclonal antibody within eight days of exposure and not yet symptomatic. USU’s Infectious Disease Clinical Research Program (IDCRP) coordinated the study at multiple sites, including five Defense Department facilities. If successful, the antibody product could benefit those in high-risk circumstances, such as health care workers, those with COVID-19-positive household members, and restaurant workers. Those receiving the antibody could see immediate immunity and up to six months of protection from COVID-19 from a single dose.

March-April

Bushmaster, Gunpowder Exercises Held After Overcoming COVID-19 Challenges

Undeterred by the many challenges of COVID-19, USU successfully carried out its two largest field exercises for students in March and April.

After being postponed in October 2020, the university held its Medical Field Practicums Gunpowder and Bushmaster with the help of months of planning and streamlining, while maintaining its goal of academic excellence.

The practicum organizers said it is important students had the chance to participate in the training events, picking up the skills that may be essential to their future medical careers.

April 12-16

AFRRI Collaborates with Defense Threat Reduction Agency, Assists with Uniform Testing

AFRRI’s Military Medical Operations team, in collaboration with the Defense Threat Reduction Agency, assisted with tri-service thermal testing of military uniforms and body armor at White Sands Missile Range, New Mexico. The most current data of uniform thermal testing post nuclear detonation comes from studies performed in the 1980s. Therefore, this development of new data will allow for updated modeling and give more accurate radiation, thermal, and blast injury patterns post nuclear detonations.

April 15

USU Sports Medicine Researchers Find Surprising Application for Botox

A popular cosmetic treatment, botulinum toxin (BoNT-A) may also be used to treat several different types of musculoskeletal disorders, according to a review published by researchers from USU's Primary Care Sports Medicine fellowship. The researchers reviewed existing analysis and evidence from their practice that suggests BoNT-A injections can provide pain relief and functional improvement in some common conditions such as chronic exertional compartment syndrome (CECS), plantar fasciopathy, tennis elbow, and osteoarthritis.

May

CAHS Receives Approval to Name MEDCoE Additional Location

The CAHS submitted a Substantive Change Request to the Middle States Commission on Higher Education Coordinating Board, asking to elevate the Army Medical Center of Excellence.

Since then, the MEDCoE has seen 126 students enroll in their Emergency Medical Services-Paramedic program and 12 in the highly competitive Preventive Medicine-Health Physics program.

In addition to the EMS-Paramedic program, this location also supports the CAHS's Health Physics course of study, with the Army Practical Nurse program planned for implementation in 2022.

May 6

Medicine Among the Stars: Astronaut Talks About His Experiences, Medical Treatments in Space

USU alumnus, American Astronaut, and Army Col. (Dr.) Andrew Morgan left the Earth onboard a Soyuz MS-13 from a spaceport in the Kazakhstan desert on July 20, 2019. Morgan spoke about his experiences and his subsequent nine-month stint onboard the International Space Station with USU students on May 6. He fielded questions about everything from the difficulty of living in microgravity to the future of medicine in space at the university.

May 10

AFRRI Celebrates 60 Years of Accomplishments

AFRRI celebrated 60 years of accomplishments as a unique national asset with an award ceremony on May 10. The event was led by then USU President Dr. Richard Thomas and AFRRI Director Army Col. (Dr.) Mohammad Naeem, who presented several awards to personnel for their contributions to AFRRI's mission. To commemorate this event, AFRRI scientists also published a commentary on AFRRI's history of achievements and unique capabilities and contribution to Radiobiology research, featured on the Radiation Research Society's website. Also this year, for the first time in AFRRI's history, the institution applied for and was successfully approved to host and participate in the Science, Mathematics, and Research for Transformation (SMART) Scholarship Program.

The College of Allied Health Sciences

3,507 TOTAL ENROLLMENT

23 DEGREE PROGRAMS

669 TOTAL DEGREES

May 12

GSN Students Receive Medals for Life-Saving Response

Two USU GSN students, Army Maj. Crystal Kelley and Navy Lt. Christopher Bunag, were awarded the Joint Service Commendation Medal by USU leadership for their heroic actions responding to an accident.

The students were at a rest station on the side of Highway 62 in El Paso, Texas, on April 13, 2019, when they came upon the gruesome scene of a collision between a minivan and a pick-up truck. There were nine casualties total. Of those, two from the truck were in stable condition. Two in the van had been fatally injured. The rest of the passengers in the van still needed help being extracted, and were suffering from serious lacerations. Kelley assisted with those casualties, as Bunag rushed back to care for a small child.

Commencements

May 15

SOM Holds Commencement on USU Campus

USU's School of Medicine graduated more than 200 students in a small ceremony held in the university's outdoor courtyard on Armed Forces Day, May 15, alongside USU's Graduate Education program graduates. The commencement exercise is one of the most unique graduation ceremonies in the nation. Medical school graduates in uniform are active-duty officers in the U.S. Army, Navy, Air Force, or Public Health Service. After crossing the stage in their academic regalia and receiving their diplomas, the graduates exit the stage and change back into their military uniforms. The graduating medical students then return to recite their respective service commissioning oath, led individually by each Surgeon General, and then they are promoted to their next rank.

May 18

GSN Holds 11 Commencement Ceremonies

Faced with the daunting challenge of holding graduation under COVID-19 restrictions, the GSN split the 2021 commencement into multiple remote ceremonies held at locations across the country. In this way, the school lowered the danger of COVID-19 infection, while allowing students to celebrate their achievements with friends and family. The school divided its traditional graduation ceremony into 11 unique events. The ceremonies, which included 70 students, occurred the week of May 3 and included locations such as Colorado Springs, Colo., San Diego, Calif., Keesler Air Force Base, Miss., and Fort Bragg, N.C.

June 11

Postgraduate Dental College Confers Degrees to 20 Military Dentists

USU's Postgraduate Dental College conferred Master of Science in Oral Biology degrees to 20 Army, Navy, and Air Force dentists attending the Navy Postgraduate Dental School during a ceremony held at Walter Reed on June 11. The newest class of dental officers will carry out their military careers in assignments across the globe, meeting Tri-Service requirements and providing specialty dental care in support of military readiness. Specialties ranged from Oral and Maxillofacial Pathology, Orofacial Pain, Periodontics, and Prosthodontics, Comprehensive Dentistry, and Endodontics.

June 8

USU, NIH Researchers Discover New Genetic Form of ALS

An international team of researchers led by USU scientists, in collaboration with the National Institutes of Health (NIH), discovered a new and unique form of amyotrophic lateral sclerosis (ALS) in a study of 11 medical-mystery patients from around the world. ALS, more commonly known as Lou Gehrig's Disease, is a rare neurological disorder that attacks cells in the brain and spinal cord, preventing communication between the nervous system and the body's muscles. In contrast to most ALS patients who are diagnosed later in life and experience rapid onset symptoms, this new form of ALS begins in childhood, progresses more slowly than usual, and is linked to a genetic mutation.

June 9

USU's MIRROR Team Investigates New Minimally-Invasive Carpal Tunnel Surgery

The first-ever Ultrasound Guided Carpal Tunnel Release (USCTR) procedure conducted in the military was performed at the Walter Reed National Military Medical Center (WRNMMC) June 9 to kick off the Uniformed Services University's Musculoskeletal Injury Rehabilitation Research for Operational Readiness (MIRROR) team's clinical trial of the new procedure. USU's MIRROR program is on the front lines of the fight against musculoskeletal injuries, which affect approximately 800,000 service members annually and result in 25 million days of limited duty. This trial is one of the team's 33 ongoing projects that will generate evidence-based approaches for treating and preventing these highly prevalent conditions.

July 6

USU Researchers Develop Artificial Intelligence Technology to Gauge Learner, Team Engagement

USU's Val G. Hemming Simulation Center is developing an artificial intelligence (AI) engine that can measure task engagement levels for teams of students in real time through wearable sensors. The Sim Center has partnered with USU's Department of Military and Emergency Medicine (MEM) to make this project a reality.

July 8

Taking Pains to Make a Difference: USU Faculty Among First Nurse Anesthetist Fellowship Inductees

USU's Nurse Anesthesia program director Navy Commander Jerrol Wallace, and associate professor Dr. Matthew D'Angelo were among the first nurse anesthetists in the country to be inducted into the inaugural class of Fellows of the American Academy of Nurse Anesthetists. The organization recognizes nurse anesthetists who are leaders in their profession and have made major impacts in the areas of research, education, and clinical practice.

July 22

USU Professor Develops Countermeasure to Deadly Nerve Agent

Researchers led by Dr. Maria F. Braga, a professor in the School of Medicine, identified a neuroprotective combination therapy that is effective against organophosphate (OP) nerve agent exposure.

Nerve agents are deadly chemical weapons that present a serious and growing threat to military and civilian populations. Nerve agents were used in the Iraq-Iran war, against Kurdish civilians, in terrorist attacks in Japan, and most recently, against civilians in Syria and England. Without intervention, OP nerve agents can cause seizures, which can have serious effects such as brain damage, coma, and even death.

July 29

Innovative Clinical Response to COVID-19

Commander Robert Kimberling, DNP phase II site director, established the COVID-19 and Acute Respiratory Clinic, an outpatient facility primarily staffed by nurse practitioners and physician assistants, at Naval Medical Center Camp Lejeune, North Carolina. The clinic ensured patients who had any kind of respiratory concern, but were not sick enough to go to the Emergency Department, quickly received the level of care they needed. This provided excellent opportunities for clinical rotations for GSN students. The clinic saw more than 22,000 face-to-face patient visits without a single COVID-19 case among its crew.

August 5

One for the History Books: USU Professor Retires After 40 Years

Dr. Dale Smith, professor of Military Medicine and History at the Uniformed Services University of the Health Sciences, retired at the end of August.

Smith taught history to more than 9,000 medical school graduates and more than 1,000 other professionals at USU. Smith began teaching regularly at the university in 1982 and saw the school as it was forged into the country's preeminent university for military medicine. Smith retired after 40 years of empowering the graduates of USU with the lessons of history.

August 12

USU Student Medical Innovations Group Develops Novel Respiratory Distress Treatment

The Medical Innovations Interest Group (MI2G), a student-led group at the Uniformed Services University devoted to empowering medical students to think creatively, developed a novel solution to treat babies with respiratory distress in austere environments where access to lifesaving medical equipment is not always available. The device is called a "bubble BPAP," which stands for bilevel positive airway pressure.

Daniel K. Inouye Graduate School of Nursing

100% APRN CERTIFICATION PASS RATE

$1.9M NEW GRANT DOLLARS

$8.6M ACTIVE GRANT FUNDING

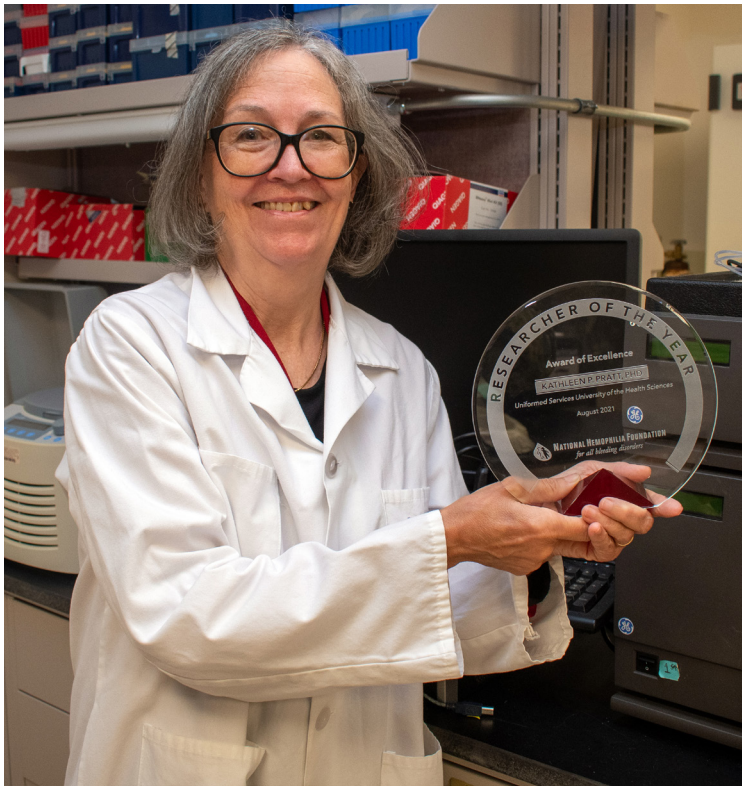
Credit: American Red Cross

August 19

Lifesaving "First Aid for Severe Trauma™" Designed for Grades 9-12 Launched, Available Nationwide

The first "Stop the Bleed" course designed for high school students -- First Aid for Severe Trauma™ (FAST™) -- is available nationwide. FAST™ teaches the public how to save a life in the moments following a life-threatening injury, such as those sustained in car crashes, or falls.

FAST™ was developed by the Uniformed Services University's National Center for Disaster Medicine and Public Health in collaboration with the American Red Cross and through funding from the Department of Homeland Security's Science and Technology Directorate. Traumatic injuries are the leading killer of people between the ages of one and 44 in the U.S., causing even more deaths than cancer, HIV, or the flu -- in fact, a person can die from blood loss in just a few minutes. In hopes of combating these statistics, FAST™ will empower high schoolers to take action, teaching them how to apply pressure and use a tourniquet, communicate with 9-1-1 dispatchers and fellow rescuers, while also keeping safe, should they find themselves facing a life-threatening injury.



August 28

Uniformed Services University Scientist Named 'Researcher of the Year' for Bleeding Disorders Research

Dr. Kathleen Pratt recently received national recognition for her significant contributions to improving treatment and care for patients with bleeding disorders, earning the National Hemophilia Foundation's (NHF) 2021 Researcher of the Year award.

The NHF award honors investigators who have made outstanding contributions to improving the lives of people with bleeding disorders -- like hemophilia, in which the blood does not clot properly -- through treatment and care. Pratt, a professor and vice chair for Research in the Uniformed Services University's Department of Medicine, received the award during the NHF's annual conference on Aug. 28.

September 14

USU Facility Dog's Promotion a Howling Success

Shetland, the first full-time medical school facility dog in the United States, was recognized for his tireless hard work and dedication to his many duties at the Uniformed Services University of the Health Sciences and was promoted to the rank of Navy commander. The university originally commissioned the facility dog as a lieutenant commander in the Navy. Shetland became the school's facility dog in 2019 to help promote education around animal-assisted interventions and provide comfort and support to USU students.

October 7

USU Researchers Commended for Innovation, Leadership with 2021 MHSRS Awards

Scientists from the Uniformed Services University of the Health Sciences were recognized with four awards from the 2021 Military Health System Research Symposium (MHSRS) for their significant contributions to research focused specifically on the unique medical needs of the warfighter.

The annual MHSRS provides an avenue for scientists to present new knowledge from military-specific research as the DOD's foremost scientific meeting. The MHSRS offers a collaborative setting for the exchange of information between military providers, research and academic scientists, international partners, and industry. Although this year's conference was canceled due to COVID-19, notable accomplishments by military and civilian researchers were still highlighted by the meeting's organizers through a number of awards.

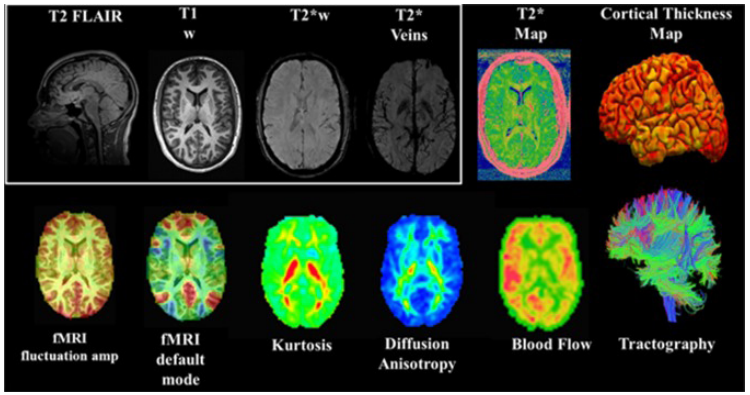
October 12

USU to Co-Lead NCAA-DOD CARE-SALTOS Study Following Athletes 10+ Years After Concussive Injury

Uniformed Services University's Dr. Paul Pasquina is co-lead for the next phase of the largest concussion and repetitive head impact study in history, the NCAA-U.S. Department of Defense Concussion Assessment, Research and Education (CARE) Consortium.

Pasquina, professor and chair of USU's Department of Physical Medicine and Rehabilitation, will lead the upcoming phase, known as CARE/Service Academy Longitudinal mTBI Outcomes Study (SALTOS) Integrated Study, as principal investigator for the DoD through USU's Center for Rehabilitation Sciences Research, coordinating engagement with the four military academies, the military's Explosive Ordnance and Disposal school at Eglin Air Force Base, as well as the Defense Health Agency's National Intrepid Center of Excellence for TBI and Intrepid Spirit Centers at Ft. Hood, Ft. Bragg, and Joint Base Lewis-McChord.

CARE is the most comprehensive and prospective study of its kind, and is the product of the historic NCAA-DoD Grand alliance created in 2014. The Consortium seeks to better understand concussion, as well as Head Impact Exposure (HIE), with broad aims to enhance the health and safety of NCAA student-athletes and military service members. It is also the first major concussion study to assess both women and men in 24 sports, and serves as a valuable resource for youth sports participants and society at large.



October 13-17

PDC Supports Bushmaster

Two Naval Postgraduate Dental School AEGD-1 residents (one-year Advanced Education in General Dentistry) and eight Air Force Postgraduate Dental School AEGD-1 residents from Joint Base Anacostia-Bolling participated in the USU Tri-Service Medical Field Practicum during Bushmaster. The residents received training in tactical movement, land navigation, pistol qualification, casualty evacuation, and leadership.

October 15

Psychiatric Mental Health Collaborative Learning

GSN Psychiatric Mental Health Nurse Practitioner program faculty, Lt. Col. Brent Donmoyer and Lt. Cmdr. Tarah Lewis, planned the first collaborative learning telepsych Bushmaster interprofessional experience for class of 2022 GSN students and PhD Psychology students. The activity involved didactic information, a virtual unit assessment, and a brief to the commander.

The 2023 psychiatric mental health nurse practitioner students and clinical psychology also completed a new didactic/clinical collaborative curriculum that includes 12 academic hours and 45 clinical hours of interprofessional education in preparation for Bushmaster. This training focused on building teamwork and collaborative knowledge of combat operational stress control concepts and application. It was led by a combined PMHNP/psychology faculty team.

October 30

Lessons Learned During COVID-19

The pandemic forced many to adapt to new teaching methods and curriculum designs. For USU's Postgraduate Dental College, many key lessons were learned. For instance, small class sizes in graduate dental residency programs allowed greater flexibility in adherence to social distancing requirements and confirmation of resident identity/participation when virtual meetings and assessments were necessary. Although clinical activities were curtailed for elective procedures, residencies continued urgent, emergent, and mission-essential care and gradually increased clinical operations as information/PPE/engineering controls became available to ensure safety for faculty, residents, and patients. Since the American Dental Association Commission on Dental Accreditation allowed broad flexibility for the use of simulations during COVID-19, other alternative methods of training/assessment were used to ensure students attained clinical competency.

Center Reports

Center for Biotechnology

The mission of the Center for Biotechnology (4D Bio^3) is to support and enhance the readiness, health, and well-being of America's warfighters, veterans, and their families by innovation, modernization, and translation of state-of-the-art biomedical technologies and services.

In 2022, 4D Bio^3 successfully translated the production of human red blood cells from the lab into two self-contained expandable stir-based prototype desktop bioreactors, allowing for autonomous manufacturing of human red blood cells. This innovation provides the potential of On-Demand Blood in austere locations, reducing the logistical requirement for cold chain transport and testing of red blood cells.

Center for Deployment Psychology

The mission of the Center for Deployment Psychology (CDP) is to lead the development of a community of culturally mindful and clinically competent providers through the delivery of high-quality training and education, the convening of experts, and the dissemination of research-based treatment and the latest topics in military behavioral health.

In seeking the best possible treatments for military patients, the Center for Deployment Psychology partnered with Design Interactive to conduct a study investigating the effectiveness of wearable technology to reduce symptoms of anger and stress for active duty service members. The study is a randomized control trial assessing the effectiveness of the Mobile Stress and Anger management Tool (MSAT), which pairs a wearable device with a smartphone app and provider website to allow patients and providers to track and intervene in stress-related events. The study is examining whether the addition of the MSAT platform will contribute to significant improvements in outcomes in patients receiving standard cognitive behavioral therapy for issues related to stress and anger.

Center for Global Health Engagement

The mission for the Center for Global Health Engagement (CGHE) is to provide operational support to the DoD Global Health Engagement (GHE) enterprise to meet national security objectives,

through leadership and knowledge; operational support to the Joint Force; education and training; research and scholarship; and assessment, monitoring, and evaluation.

CGHE continued to provide programmatic support to the APRRP mission by providing timely responses to critical requests for information to facilitate rapid deployment of Level 2 hospitals in the domestic COVID-19 response of Uganda, Rwanda, Senegal, and Ghana. CGHE's adaptability helped USAFRICOM deliver its promise to enhance the medical capabilities and pandemic response of its partners, demonstrating the value of these long-term investments to the command and to U.S. national security. The reallocation of efforts from peacekeeping to pandemic response was approved by Congress and the Department of State.

Center for Health Professions Education

The mission of the Center for Health Professions Education (CHPE) is to be the premier provider of health professions education for the MHS through leadership in teaching, research and innovation, by building education, research, and leadership capacity through the mentoring of graduate students, health professional trainees (e.g., medical and faculty members; generating new knowledge in health professions education through research and innovation educational practices; developing a collaborative community of inter-professional scholars and educational leaders in health professions education; and engaging in education-related knowledge translation activities with the potential to improve patient care and clinical practice.

CHPE grew the total number of enrolled students to over 150 learners, adding perspectives from throughout the MHS. More than 100 graduates from the program in fewer than 5 years produced a cadre of alumni to lead academic programs in the MHS. This year 10 MHPE degrees and three PhDs, were awarded in addition to 51 program certificates. Graduates included 17 medical students from the class of 2020, who completed HPE coursework when the COVID-19 pandemic necessitated canceling clerkships. CHPE also created the Health Education Interest Group for Higher Training (HEIGHT) and peer-tutoring based IFHPE certificate to enhance opportunities for USU medical students.

Center for Health Services Research

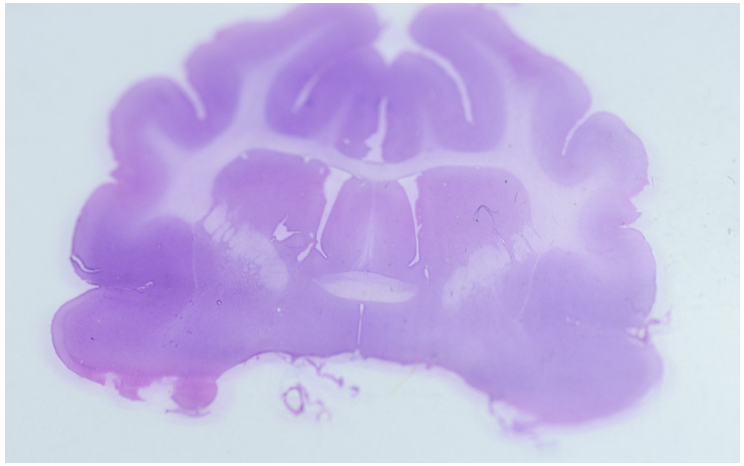
The Center for Health Services Research (CHSR) supports the readiness of America's warfighters and improved outcomes for the military community by building capacity throughout the MHS to conduct health services research that support MHS goals, the DoD's mission, and the national security strategy.

The CHSR has a specific focus on low-value care (LVC), which is defined as care which does not benefit and may cause harm to the patient. CHSR publications have directly informed policy changes leading to better care and lower cost in the MHS.

Center for Military Precision Health

The mission of the Center for Military Precision Health (CMPH) is to conduct innovative research to apply genomic science, discoveries, and precision techniques to enhance the health, readiness, and wellbeing of the warfighter and the community of DoD beneficiaries.

In response to the global COVID-19 pandemic, scientists from The American Genome Center (TAGC), part of the CMPH, joined the international COVID-19 Human Genetics Effort (CHGE), which is a global consortium combining the efforts of more than 50 sequencing hubs and hundreds of hospitals and scientists. Participating centers from the U.S. and around the globe provided samples to NIAID and TAGC at USU to study genetic determinants of susceptibility to severe COVID-19 infection. These efforts resulted in two papers published in the journal Science: "Autoantibodies against type I IFNs in patients with life-threatening COVID-19," and "Inborn errors of type I IFN immunity in patients with life-threatening COVID-19."



Center for Neuroscience and Regenerative Medicine

The mission of the Center for Neuroscience and Regenerative Medicine (CNRM) is to conduct cutting-edge research, with an emphasis on clinical trials, that improve outcomes for U.S. service members with traumatic brain injury (TBI).

CNRM's Neuropathology-Neuroradiology Integration Core has developed and tested a new form of advanced brain MRI that allows detection of traumatic axonal injury, a common result of TBI of all severities including concussion. These methods were tested using human pathological specimens from the USU Brain Bank. Ongoing work involves testing similar methods on tissue with interface scarring, commonly caused by blast injury. The new MRI techniques will allow objective assessment of currently invisible forms of brain injury including traumatic axonal injury and interface scarring.

Center for Rehabilitation Sciences Research

The Center for Rehabilitation Sciences Research (CRSR) will lead synergistic rehabilitation-related translational research efforts and disseminate knowledge across the Military Health System to optimize the rehabilitative care for injured service members in order to promote their highest functional recovery, independence, quality of life, and return to active duty.

In collaboration with the Department of Rehabilitation at WRNMMC, rehabilitation professionals developed and published the "COVID-19 Patient and Caregiver Guide" (English and Spanish) to help optimize home rehabilitation, recovery, independence,

Postgraduate Dental College

7 Dental ADA-recognized Specialities

Comprehensive Dentistry (2 years)

Periodontics (3 years)

Prosthodontics (3 or 3.5 years)

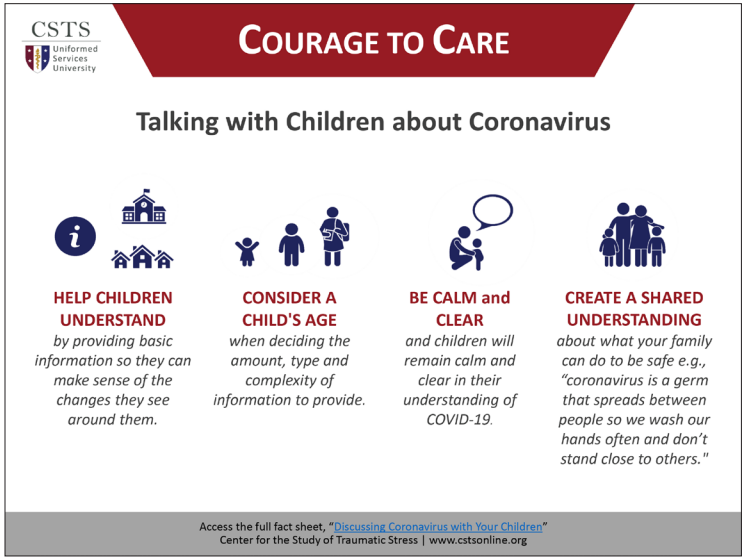
Orthodontics (2 years)

Endodontics (2 years)

Oral & Maxillofacial Pathology (2 years)

Orofacial Pain (2 years)

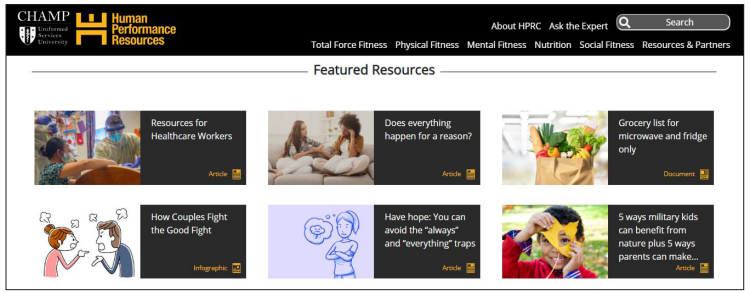
safety, nutrition, and community reintegration. The guide has been distributed throughout the MHS, including to families of deployed service members. These efforts in caring for inpatients and outpatients with COVID-19, including establishing peer-support groups, have been published in the AMEDD Journal and presented at several national conferences. Work continues to further understand post- COVID-19 syndrome and how to optimize return to duty for active duty service members.



Center for the Study of Traumatic Stress

The Center for the Study of Traumatic Stress's (CSTS's) activities support the USU Strategic Framework and the mission of the DoD. CSTS is committed to advancing trauma-informed care and dedicated to furthering the nation's understanding of the impact of trauma on individuals, families, and communities. The Center's work includes a broad range of trauma exposures: combat, terrorism, natural and human-made disasters, public health threats, and humanitarian operations. CSTS has been involved in the response to nearly every major disaster our nation has experienced in the past 30 years. The Center studies military and civilian disasters, using lessons learned in each community to inform the other, and helps to ensure that behavioral health is addressed in the face of public health threats, disaster planning, and disaster recovery. Mitigating the effects of disaster and trauma in military and civilian populations is part of the effort to foster community and national resilience. The Center informs and educates community, regional, state, national, and global stakeholders in government, industry, healthcare, public health, and academia. CSTS contributes to advancing trauma-informed care by providing leadership in research, education, training, consultation, global health, and service.

The CSTS Child and Family Program (CFP) was actively involved in the Center's response to the COVID-19 pandemic through programmatic consultation and the development of child and family informational resources. CFP personnel consulted with public health organizations regarding COVID-19, including Sesame Workshop's Sesame Street in Communities, Blue Star Families, the Military Child Education Coalition, and others. CSTS highlighted effects of COVID-19 on children and families in fact sheets distributed globally (in multiple languages) and published a blog post at the prestigious International Society for Traumatic Stress Studies on "Death notification, grief, and posttraumatic stress: Implications for COVID-19 deaths."



Consortium for Health and Military Performance

The mission of the Consortium for Health and Military Performance (CHAMP) is to optimize warfighter mission performance and family readiness through leadership, community engagement, education, and conducting and translating human performance research.

CHAMP staff delivered 50+ presentations and 12 live social media events (co-hosted with Military OneSource) to disseminate HPO education to service members, military family members, federal employees, and the DoD community. These knowledge solutions provided actionable health and wellness information from subject matter experts to encourage beneficial behavior change towards greater health for the military community. CHAMP also produced "Get into Fighting Weight: A Total Force Fitness Guide" at the request of the military dietitian community. The guide is a comprehensive approach to weight loss and weight management.

The guide includes worksheets, articles, and resources to help military service members look at the intersection of the TFF domains with weight and overall health. As a knowledge solution, this guide provides tool for dietitians and health promotion professionals seeking evidence-based, military-specific, actionable information to influence the health and wellness behaviors of service members.

Defense and Veterans Center for Integrative Pain Management

The Defense and Veterans Center for Integrative Pain Management (DVCIPM) leverages the best available evidence, clinical expertise, and collaboration to develop and communicate recommendations in support of DoD pain management practice, education, and research.

A key component of the DoD's comprehensive pain management strategy is developing responses to address the ongoing national epidemic of prescription pain medication (specifically opioids) overuse, misuse, diversion, and overdose. Co-prescribing naloxone to patients assessed to be at higher risk of opioid overdose is an evidenced-based best practice that has been demonstrated to save lives. DVCIPM, in collaboration with DHA J9, developed the DHA OEND program in 2020. The OEND education and training materials developed for providers, patients, and family members are all available on the Health.mil OEND landing page. DVCIPM is also working with the DHA Pain Management Clinical Support Service to establish local OEND champions at every DHA market and medical treatment facility.

DoD Medical Ethics Center

The DoD Medical Ethics Center's (DMEC's) mission is to function as the national and international lead in military medical ethics for all DoD healthcare providers, to establish a centralized resource for healthcare ethics information and consultation, to ensure the growth of USU students into ethical providers and military leaders, and to educate students and leadership to create an environment of top-down and bottom-up medical ethics knowledge exchange.

DMEC has been creating a Bioethics Training Course designed to elevate the foundational knowledge of the personnel assigned to the MEC across the MHS. The Bioethics Training Course will address general bioethics principles, best practices for ethics consultation requests, and unique challenges within the military medical ethics domain. Future iterations of the course will confer a certificate of completion and ideally be run on a biannual basis, as a train-the-trainer model for further dissemination of the subject information. The initial offering of the Bioethics Training Course will be structured as a virtual event, due to pandemic restrictions. Eventually, the Bioethics Training Course will evolve into a hybrid model, with both live attendance at USU and remote learners. The Bioethics Training Course curriculum materials will be contained on the forthcoming mobile application to disseminate the knowledge to a broad audience. In so doing, DMEC is expanding the capabilities of the local MECs, as well as those of the MHS healthcare providers.

Infectious Disease Clinical Research Program

The Infectious Disease Clinical Research Program (IDCRP) will conduct multicenter infectious diseases clinical research, focusing on high-impact cohort and interventional trials, to inform and improve care of the warfighter.

Epidemiology, Immunology and Clinical Characteristics of Emerging Infectious Diseases with Pandemic Potential (EPICC), or EPICC, is a prospective, longitudinal observational cohort study of SARS-CoV-2 infections in active-duty service members and DoD beneficiaries to address critical knowledge gaps and inform and support the development of diagnostic, treatment, and preventive strategies. Currently, more than 4,000 participants have enrolled with specimens being analyzed by a collaborative lab network, including sequencing of emerging variants of concern and vaccine breakthroughs.

F. Edward Hebert School of Medicine

8,315
SOM GRADUATES IN TOTAL IN 2021

10 MD & GRAD DEGREE PROGRAMS

65% CONTINUE SERVING BEYOND OBLIGATION DATE

John P. Murtha Cancer Center Research Program

The mission of the John P. Murtha Cancer Center Research Program (MCCRP) is to improve the diagnosis and multidisciplinary treatment of DoD cancer patients through innovative translational research, evidence-based translational care, and education. Through coordination and alignment with tri-service cancer research initiatives throughout the MHS, the MCCRP enhances the readiness of the military, its families, and beneficiaries. The MCCRP employs the unique resources of the DoD leveraged with other federal and civilian partners to research and enhance translational cancer care for Service Members and DoD beneficiaries.

The Center's DoD Framingham study has been taking blood samples from past and present service members and analyzing their blood proteins with the nation's most robust mass spectrometry capabilities. It identifies new biomarkers for early cancer detection and treatment outcome prediction, benefiting all DoD and civilian cancer patients. Additionally, the Military Cancer Clinical Trials Network has allowed the MCCRP to offer all of our capabilities and programs to all service members with cancer, no matter where they are being treated across the DHA.

National Center for Disaster Medicine and Public Health

The mission of the National Center for Disaster Medicine and Public Health (NCDMPH) is to improve our nation's disaster health readiness through education and science.

NCDMPH provided interagency support throughout the pandemic. The team collaboratively developed A Guide to Support the Wellbeing of Healthcare Personnel during a Time of Crisis for healthcare responders across the DoD and civilian healthcare sectors, published multiple peer-reviewed papers and editorials regarding the pandemic's impact on healthcare workers and the healthcare system, and released several COVID-19 focused webinars.

Surgical Critical Care Initiative

The Surgical Critical Care Initiative (SC2i) advances the care of critically ill combat casualties and civilian patients by leveraging precision medicine that integrates biomarkers, clinical data, and artificial intelligence.

SC2i's ability to develop and apply personalized medicine techniques requires the development of a well-characterized

biobank/databank to leverage all relevant medical data to develop predictive algorithms that will enhance complex decision making in the acute care space. SC2i's current biobank includes ~66M data elements in its Central Data Repository (CDR) reflects the Center's enrollment of 2,400+ critically ill or injured patients. The CDR also represents a vital resource for researchers to advance their research interests and develop knowledge products.

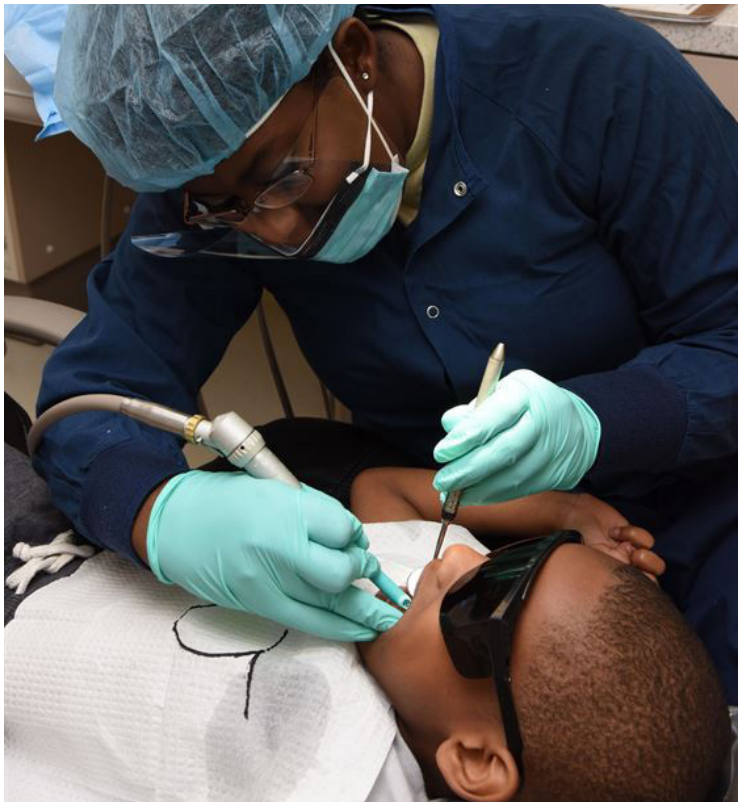
The SC2i Bio and Data Bank is accelerating research in the precision medicine field leading to dozens of knowledge and material products for use by military and civilian surgical care providers around the world.

Tri-Service Center for Oral Health Studies

The mission of Tri-Service Center for Oral Health Studies (TSCOHS) is to collect, analyze, and report oral healthcare information, provide dental public health education and research support for the Postgraduate Dental College, and to support the MHS so that timely, data-driven decisions can be made for:

- Developing oral healthcare policies and programs to achieve optimum dental readiness and warfighter lethality and to improve the oral health-related quality of life for all beneficiaries.
- Creating greater awareness and understanding of military oral healthcare issues.
- Maximizing the efficiency of the military's oral healthcare delivery system.
- Advancing programs that identify environmental and behavioral causes of oral disease and the countermeasures needed to overcome those factors.

When necessary to support dental readiness, military members may receive care from private sector dental providers. The care is supported by the TRICARE Active Duty Dental Program (ADDP), overseen by the DHA. When a new contract is needed, the TSCOHS dental staff are often nominated by their respective services to serve as subject matter experts on the Sole Source Evaluation Board (SSEB). In 2020 and 2021, TSCOHS personnel spent over 1,500 hours successfully executing SSEB duties, ensuring the services have continued access to the dental care necessary to support dental readiness for over 1.1M members. This work allows DHA to select the best ADDP Network plan possible at the best overall value to the Government.



Tri-Service Nursing Research Program

The mission of the Tri-Service Nursing Research Program (TSNRP) is to facilitate nursing research to optimize the health of military members and their beneficiaries.

TSNRP funded 38 research and EBP projects that are improving patient outcomes and COVID-19 infection control practices. Demonstrable projects include ultraviolet light breaking the chain of infection; antimicrobial and sporicidal curtains; 2 percent chlorhexidine gluconate antiseptic solution wipes for bathing ICU patients; non-pharmacological EBP interventions for pain, anxiety, and sleep; earlier identification and screening for delirium; and the COVID-19 Biobehavioral Health Care Personnel Self-Care Tool Kit. The TSNRP Evidence-Based Practice Supplement in the Journal of Military Medicine Vol. 185, May/June Supplement 2020 provides an overview of EBP efforts by military nurses.

Val G. Hemming Simulation Center

The mission of the Val G. Hemming Simulation Center is to deliver and develop leading edge advances in medical simulation education, research, and readiness.

The Clinical Skills team provided over 200 simulation events for more than 765 combined learners from the School of Medicine, Graduate School of Nursing, Clinical Psychology, and Graduate Medical Education. These simulation events are a knowledge solution that provide both formative and summative assessments of learners. Throughout these activities, students have opportunities to develop clinical skills. In addition, data has been collected and provided to faculty to track learner progress in their respective programs. This information allows faculty to determine what skills are being actualized and to identify learners who may need additional assistance mastering specific clinical skills. The pandemic allowed the Center to implement virtual and remote simulation and conduct a hybrid of simulation activities, both in person and remote. All data collected on student performance was analyzed under a cooperative agreement with USU that allows tracking student performance in simulation over time. The Clinical Skills team presented innovative work at the Association of Standardized Patient Educators annual meeting. The creation of the Clinical Psychology Objective Structured Clinical Examination, and training techniques for standardized patients to ensure they maintain the necessary skills to perform their simulation roles with consistency and realism.


Packard


USU
Uniformed
Services
University