

The Official USU Newsletter

the pulse

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Learning to Care for Those in Harm's Way

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Photo by MC3 Laura Bailey

On the cover

Students at the Uniformed Services University participated in the Master Fitness Leadership Training Course, July 15. Read more about the training on page 8.

Novel diagnostic marker can detect PTSD

by USU External Affairs

Scientists at the Uniformed Services University have identified a novel panel of diagnostic markers for post-traumatic stress disorder which can lay the foundation for development of next generation diagnostic tests for PTSD.

Post-traumatic stress disorder is a chronic psychological disorder which can occur because of witnessing a traumatic event. Symptoms of PTSD often overlap with mild traumatic brain injury which further complicates its diagnosis especially in war veterans where mild brain injury is also prevalent. Currently, a diagnostic test is not available for PTSD which can lead to a delay in accurate diagnosis and treatment.

In an article published online in the Journal of Psychiatric Research in June 2014, Dr. Radha K. Maheshwari, a professor of pathology at USU, along with his team including Dr. Nagaraja Balakathiresan, Raghavendar Chandran (graduate student), Dr. Manish Bhomia, Dr. Min Jia and Dr. He Li identified a unique and specific panel of microRNAs (small RNA molecules) in blood samples associated with PTSD-type symptoms in an animal model. Previously, Maheshwari's group also identified specific microRNAs for diagnosis of blast-induced traumatic

brain injury. The findings of those studies were published in the Journal of Neurotrauma in May 2012.

"PTSD and mTBI exhibit a spectrum of common clinical features such as difficulty in concentrating, sleep disturbance, depression, anxiety, irritability and fatigue which makes it difficult to differentially diagnose PTSD and mTBI," said Maheshwari.

"Veterans who suffer from psychological problems can be tested for the presence of PTSD which can help in timely medical intervention. PTSD is also prevalent in the civilian population and a timely diagnosis can significantly improve the outcome. This study is of significant importance to military since these results may lead to development of novel microRNAs based diagnostic methods for PTSD," he added.

These studies were supported by funding from Defense Medical Research and Development Program whose primary mission is to advance medical research and development for wounded warriors. This research may lead to novel advancements in diagnosis of mTBI and PTSD, which are a significant problem for both veterans and civilian population.

Do you have an interesting story to tell? Share your ideas with Pulse staff members in room B1009 or via e-mail at christine.creenan-jones@usuhs.edu.

USU hosts Sexual Assault Prevention and Response Seminar

by MC2 Brittney Cannady, writer and photographer

Dr. Nathan Galbreath, a senior executive advisor for the Department of Defense Sexual Assault Prevention and Response Office, was the guest speaker at a seminar hosted by the Office of Equal Employment Opportunity at the Uniformed Services University, July 10.

“Dr. Galbreath was chosen because he is the expert for the DOD’s Sexual Assault Prevention and Response programs, training initiatives and research. This SAPR training provided the entire USU community with valuable knowledge in sexual assault prevention,” said EEO director, Patricia Burke.

Sexual assault has received a lot of high-level attention in the DoD recently, and top leaders are working to eliminate the problem.

Galbreath, a USU alumnus and licensed psychologist,

spent 11 years as an Air Force special agent for the Air Force Office of Special Investigations. Furthermore, he has been the lead author for the DoD’s annual reports on Sexual Assault in the Military since 2007.

Galbreath believes maintaining an environment of dignity and respect in the workplace is one way to curb sexual assault in the DoD.

“Unchecked sexual harassment gives offenders room to commit crimes because they do not believe their behavior is criminal,” he said.

The SAPR Annual Report on Sexual Assault in the Military spans more than 5,000 reports of sexual assault but Galbreath said the problem is still “vastly underreported.”

In fact, a DoD survey estimates about 26,000 cases of unwanted sexual contact were never brought forward by victims.

“Because it is underreported, we have to ask ourselves, ‘if I were sexually assaulted by someone in the workplace, would I report it, and what would happen if I did?’ If you think about that, it’s a very challenging situation,” said Galbreath.

Victims may not report sexual assault because of fear of retaliation or punishment. By fostering a safe workplace, Galbreath hopes more victims will begin to report assaults when they happen.

“When more victims report, it’s our opportunity to get them care, to get them back on their feet and provide them with services they need to recover. It’s also our opportunity to hold offenders appropriately accountable, and that’s our way to make a very clear message that this type of behavior will not be tolerated,” he said.



Photo courtesy of NASA

Astronaut in training

Army Maj. (Dr.) Andrew Morgan, an F. Edward Hébert School of Medicine alumnus, was selected for the astronaut program by NASA in 2013. Since then, he has been undergoing diverse and rigorous training to prepare for future missions into space. Here, Morgan practiced replacing a multiplexer/demultiplexer space station computer.

Follow Morgan’s progress on Facebook as he continues his astronaut training at #USUDrewMorgan.

SoM professor achieves 'Master Teacher' certification

by MC3 Laura Bailey, writer and photographer

Dr. Martin Ottolini, Capstone Program Director in the Office of Curriculum at the F. Edward Hébert School of Medicine, recently completed George Washington University's Master Teacher Leadership Development Program for faculty members who teach medical students, residents and fellows.

Emphasis is placed on strengthening teaching skills, encouraging scholarship in education and cultivating educational leadership potential in the program's participants.

The program, administered by

GW's Graduate School of Education and Human Development for the School of Medicine and Health Sciences, consists of six courses taken over one year, with a selected team of educators from several institutions which has included participants from USU, the Veteran's Administration and the National Capital Consortium.

Faculty members who complete the program are awarded a graduate certificate in leadership development from GSEHD. The core courses can serve as the foundation for a master's degree in Education and Human Development.

ment.

"USU has always been a leader in education innovation," said Ottolini. "I plan to use the tools and approaches I acquired through this training to continue to support the development and vitality of our curriculum, particularly in the Capstone Program which is the final phase of our Molecules to Military Medicine Curriculum. The ability to link your current work to your own long-term skill development is the kind of opportunity uniquely available at the Uniformed Services University, and is a win-win for everyone."

Meet the SoM's chief of staff: Navy Cmdr. Kevin Jackson

by Christine Creenan-Jones, editor

As a licensed optometrist, Navy Cmdr. Kevin Jackson has spent the bulk of his military career engaged in patient care, administration and academic medicine. In fact, before coming to the Uniformed Services University as Chief of Staff for the F. Edward Hébert School of Medicine, he was immersed in all three simultaneously while stationed at Ft. Belvoir Community Hospital in Virginia.

At Ft. Belvoir, Jackson was the Deputy Commander of Education, Research and Training. In this role, he helped develop the hospital's academic mission with an average daily census of 120 in-house students.

"I've always been a bit of a geek, so getting involved with education was a great way to stretch myself in an academic environment," he said. "Also, I like new challenges, so being a part of the team that opened Fort Belvoir Community Hospital was exciting. We helped drive the hospital's mission. It was a really rewarding experience."

For Jackson, the rewards of military service have been plentiful, and they stretch back many years. In fact, while running the optometry clinic at the U.S. Naval Academy, Jackson volunteered for sea duty days before a 7.0-magnitude earthquake ravaged the island nation of Haiti in 2010, leaving more than 600,000 thousand casualties in its wake.

Jackson joined the U.S. military's massive disaster responsive effort aboard the USNS Comfort, where he provided acute ocular care to earthquake survivors for more than two months.

"On the Comfort, we performed a lot of eye exams, and in some cases, provided glasses to people who've never had them before. For me, it was immensely gratifying work because I felt like I was making a lasting impact on someone's life," he said.

Jackson hopes to make the same kind of impact at USU as Dean Arthur Kellermann's right-hand man. In his new position, Jack-



Photo by Sharon Holland

Navy Cmdr. Kevin Jackson

son is overseeing daily operations for the Hébert medical school and planning for the university's future.

"Part of my job is to look at the big picture and find ways for us to move forward in a way that maximizes the incredible talent and resources available at our medical school," he said. "I'm excited to take this challenge on because I know the value of USU's incredible mission."

USU fellow puts new face on dental medicine

by Christine Creenan-Jones, editor

Cancer, congenital disease, gunshot wounds and other trauma can transform faces into unrecognizable visages. Often, treatment – or the injury itself – leads to missing eyes, noses, ears and jawbones. Moreover, disfiguring facial wounds can also significantly impair daily functions, like talking, eating and breathing.

Treating these types of facial injuries can be challenging. It requires multidisciplinary collaboration between physicians, dentists, engineers and technicians who join forces to piece their patients back together.

Army Lt. Col. Cynthia Aita-Holmes – who earned her master’s degree from the Postgraduate Dental College at the Uniformed Services University as part of her maxillofacial prosthodontics fellowship at the Naval Postgraduate Dental School – is part of this elaborate process at Walter Reed National Military Medical Center in Bethesda. She creates synthetic body parts from molds cast into silicone that are painted to match the unique characteristics of a person’s face. In best case scenarios, the transition from skin to silicone is nearly indiscernible.

“I try to make my prostheses as close to perfect as possible because my patients have already endured so much by the time I see them. Hopefully, fitting them with a natural, comfortable prosthesis brings a little solace to their difficult recovery process,” said Aita-Holmes.

Creating eyes that twinkle, ears that dip and fold in all of the right places and noses with the perfect bridge is equal parts science and artistry. That’s why Aita-Holmes, a dentist and visionary, uses both the left and right sides of her brain to make prostheses that are functionally sound but visually appealing.

“I had a patient who had the tendency to place her hand on the corner of her mouth to improve her speech with her prosthesis. One day, while out at her local grocery store, the cashier told her it was difficult to hear what she was saying with her hand over her mouth. My patient was happy when the cashier told her she couldn’t tell she was wearing a prosthesis,” said Aita-

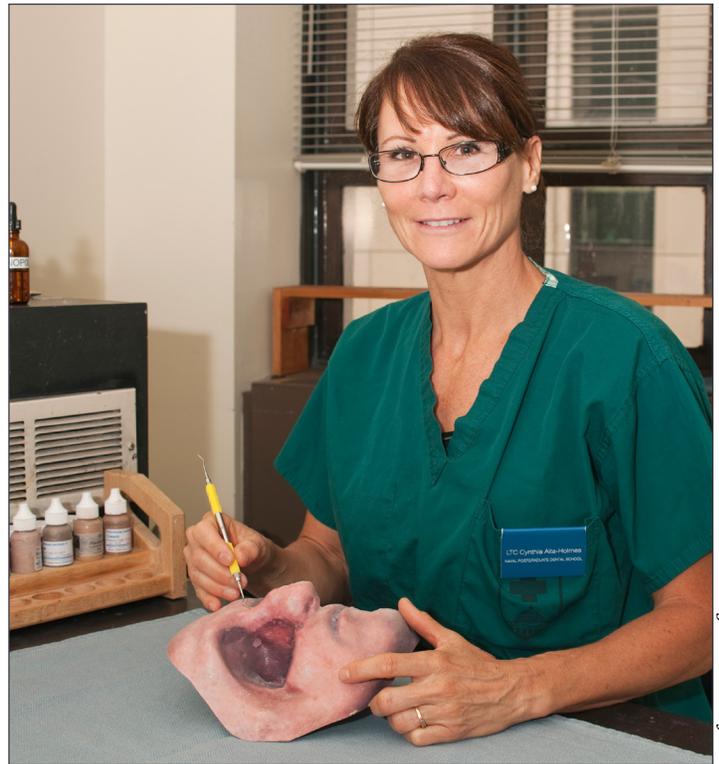


Photo by Thomas Balfour

Army Lt. Col. Cynthia Aita-Holmes makes facial prostheses for wounded warriors, people with congenital disease and cancer survivors.

Holmes. “As her provider, I was thrilled, too. I want my patients to feel comfortable in their skin, real or silicone.”

Across the country, a handful of military dentists like Aita-Holmes are studying maxillofacial or practicing in military hospitals around the world. The field has become especially important over the past 12 years because thousands of service members have sustained facial wounds while serving in Iraq and Afghanistan. Although most combat veterans have been fitted with their first prosthesis already, a new one has to be made annually because daily wear-and-tear lessens their functionality and authenticity.

Furthermore, cancer and congenital disease strike without restriction, making the need for maxillofacial prosthodontists imminent.

“I absolutely love what I do because I’m part of a team that delivers life-changing treatment,” said Aita-Holmes. “Personally, I can’t imagine a more rewarding and fulfilling career.”

1st Lt. Rachel Broussard: From USU enlisted staff to GSN student

by MC3 Laura Bailey, writer and photographer

Air Force 1st Lt. Rachel Broussard is currently a student at the Daniel K. Inouye Graduate School of Nursing but her military journey began at the Uniformed Services University more than a decade ago.

“I was stationed at USU in 2001,” said Broussard. “I worked in the (University Health) clinic as a medical technician. I participated in many Bushmaster exercises, FTX 101s and the Antietam Road marches. I was in the medical clinic or I was doing moulage for the mass-cal. From the operational perspective, I did not exactly know how everything was run. Only enough to be dangerous,” she joked. “If I had only known then that I would one day participate as a student, I would have taken more notes.”

While Broussard was hard at work in the clinic, she was also pursuing a college degree, with her sights set on future enrollment at USU.

“I was stationed here enlisted, going to school full-time nights and weekends,” said Broussard. “I finished my first bachelor’s at Southern Illinois University in health care administration. In addition, I got my science courses out of the way and thought I wanted to go to med school but I changed my mind after I had kids. Nursing was the best option for me. Nursing is very flexible, and has allowed me to explore many clinic and inpatient environments.”

With one bachelor’s degree under her belt and two years left on her nursing degree, she applied to the Nurse Enlisted Commissioning Program in 2007.

“I worked with some amazing physicians over in the clinic and they were all very supportive of my goals,” said Broussard. “So, I applied for the commissioning program and got my bachelor’s in nursing.”

She graduated in 2010 from the University of Maryland, Baltimore



Courtesy photo

Air Force 1st Lt. Rachel Broussard (second from left), a student in the Psychiatric Mental Health Nurse Practitioner Program at the Daniel K. Inouye Graduate School of Nursing, credits the support of her family for her professional success.

with a degree in nursing. Afterward, she served as a nurse in the Labor and Delivery department at Langley Air Force Base in Va., where she ran the Exceptional Family Member Program. After attending officer training school, Broussard came back to USU, this time as a student in the Psychiatric Mental Health Nurse Practitioner Program.

“I had always wanted to do psych nursing but there was not a direct route in the Air Force as a new nurse. I had started pursuing my master’s on my own then learned about the PMHNP program here at USU. Additionally, it was a doctorate degree, so it was even more enticing. I think being on staff has helped build confidence for being a student because I know how supported the students are here. I knew that going into it. At the same time though, it’s a different role. You’re in a learning role rather than being in a leadership role. I have to take a step back and know that now I have a lot to learn from other people. It’s a good thing. Being on staff has also helped me know what to expect and relieve some of the anxiety that

usually accompanies an opportunity like this,” she said.

Although Broussard has proven that she can work hard, she also credits the support of her family with helping her get this far.

“I have a lovely wife, Vanessa Broussard, and our four amazing children. They are my world. It can be overwhelming at times, but at the end of the day, family is the reason we do what we do,” she said.

The last year for her has been especially monumental, both personally and professionally.

“I have been so blessed throughout my life and Air Force career,” said Broussard. “I am so grateful for the mentors I had when I was stationed here so many years ago. In fact, many of them are still here. They have just retired the uniform. The ending of the Defense of Marriage Act and my acceptance to the GSN has given me new confidence,” she added. “My personal and professional opportunities feel limitless. I am thrilled to have this momentum in my favor and hopefully do amazing things as a future USU graduate and psychiatric nurse practitioner.”

GSN Associate Dean inducted into American Academy of Nursing

by MC3 Laura Bailey, writer and photographer

Dr. Sandra Bibb, the associate dean for faculty affairs at the Daniel K. Inouye Graduate School of Nursing, will join the American Academy of Nursing fellows during the induction ceremony at the Academy's 2014 Transforming Health, Driving Policy conference in Washington, D.C., Oct. 18. She is one of 168 nurses selected for the 2014 class of Academy fellows.

"The American Academy of Nursing welcomes this stellar cohort of new fellows," said Academy President Diana Mason, PhD, RN, FAAN. "As clinicians, researchers, educators, executives and leaders in all sectors of our society, they are joining the nation's thought leaders in nursing and health care."

A panel of elected and delegated fellows reviews the applicants and selects those nurses whose careers have had the most effect on health policies and health overall.

"It's quite an honor because it's a pretty prestigious group," said Bibb, a USU faculty member since 2004, "and there is a very small percentage of nurses who get in."

New inductees are encouraged to join expert panels upon induction to the Academy. These expert panels represent the Academy's working groups and provide forums where fellows come together within their expertise area. Current research and needs in health care help expert panels make recommendations on projects or initiatives which ultimately shape health care policy and practice.

"My mentor in the process recommended, and I agreed, that I had positioned myself to be inducted for my contributions in research in the area of population health and access to care," said Bibb. "I want to really roll my sleeves up and join forces in terms of making a difference and improving health care, particularly in access to health care," said Bibb. "My area of research



Dr. Sandra Bibb

Courtesy photo

looks at people who have health insurance, but perhaps don't use that coverage for preventive services. Access is more than having health coverage – it's also using it. This is a great group of nurses who are making major contributions. I'm looking forward to the opportunity for me to grow and learn from others who've pioneered in a areas of practice, education, research and policy."

In addition to being selected for induction, a new position awaits her as dean and professor at the College of Health Professions, Wichita State University in Wichita, Kan. She will relocate to WSU at the end of July.

"I'm going to miss a lot of things," said Bibb, who recently celebrated her 10th anniversary at USU. "You know, they (the GSN) had a party for me. I stood around with my Kleenex in my hand as people said things. I'm going to miss the people, this sense of community and family."

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Master Fitness Training Course benefits USU students, mission

by MC3 Laura Bailey, writer and photographer



Photo by MC3 Laura Bailey

Medical students at the Uniformed Services University participate in the U.S. Army's Master Fitness Training Course.

Army and Navy medical students at the Uniformed Services University participated in the Master Fitness Training Course as part of their Summer Operational Experience, July 7-18.

The MFTC provides the Army with certified fitness advisers who have earned Army Skill Identifiers as Master Fitness Trainers and who serve as additional-duty special advisers to unit commanders. These MFTs facilitate physical training based on the Army's Physical Readiness Training program.

"This course was established after partnering with the Army Physical Fitness School last year when cooperating on a functional movement conference. With the Army re-instituting the Master Fitness Trainer's Course, we thought this was an excellent opportunity to bring an operational program from U.S. Army Training and Doctrine Command directly to our students. As opposed to our teaching fitness, we thought real-world Army fitness instructors teaching "doctrine" would be value added to our students, and serve as a great summer operational

experience. On top of the course of instruction, the Department of Military and Emergency Medicine added its own educational twists, and in the end, we had a program of instruction of high educational and operational value to our students," said Army Col. (Dr.) Francis O'Connor, chair of the Department of Military and Emergency Medicine.

The emphasis of the MFTC is meeting the mission through proper fitness training and preventing injury as well as re-integrating the injured back into their unit.

"The Army is fielding a system of physical performance optimization to improve combat readiness," said Army Maj. David Feltwell, a physical therapist at the United States Army Physical Fitness School. "Health care providers who understand that system can play a lead role in improving the medical readiness of the force."

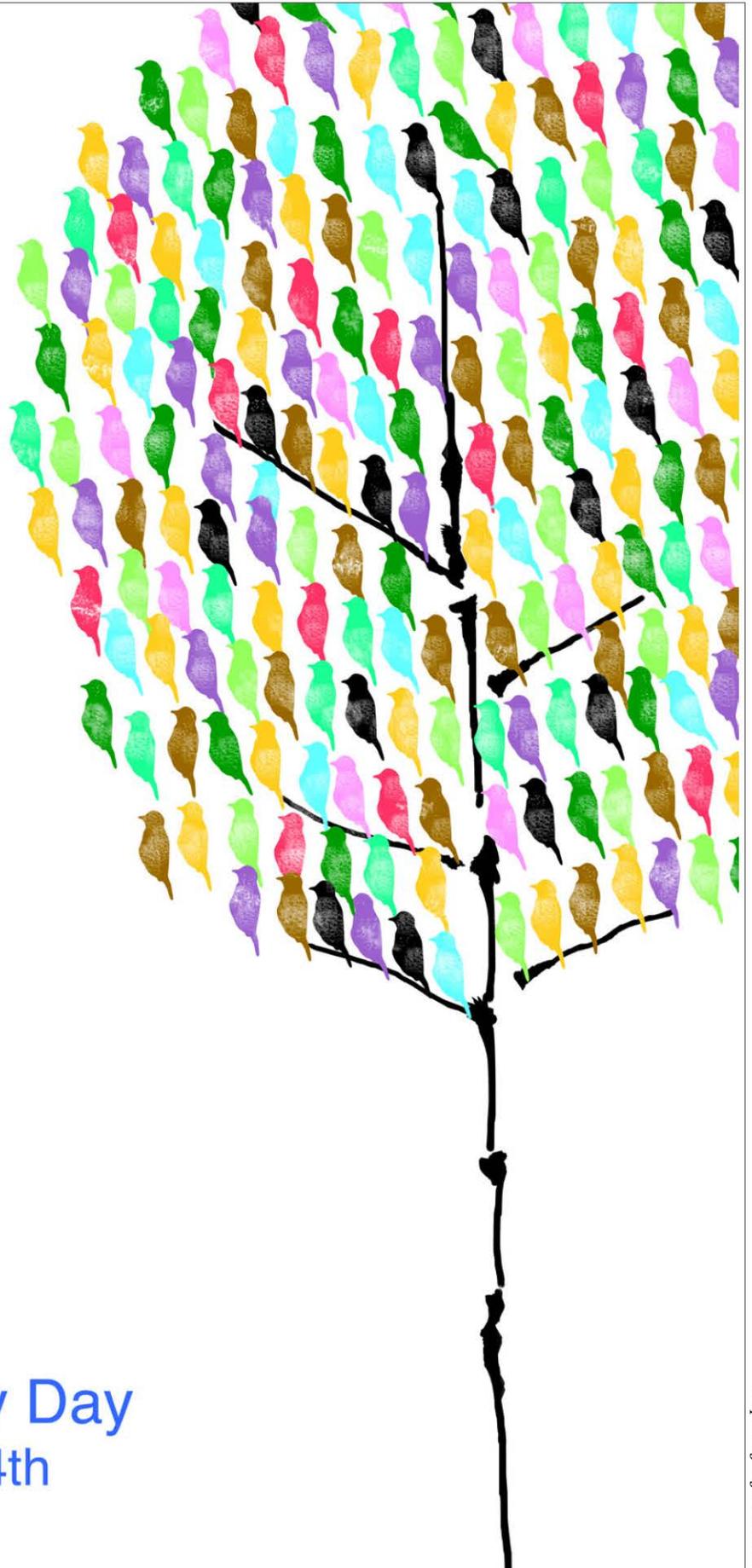
At USU, students participating in the MFTC learn everything from nutrition planning to running techniques.

"As a Navy student, it's been really enlightening to learn how the Army

runs their Army Physical Fitness Test and how they do a lot of their training since we are a tri-service school," said Navy Ensign Allison Spies, a class of 2017 student at the F. Edward Hébert School of Medicine. "We've been told a lot that we're moving toward a tri-service health system where we might be interacting with the other services. It would be helpful to know what their services are going through as far as physical training."

Furthermore, having this knowledge base delivered from a subject matter expert is helpful.

"It was really great to have the professionals come up from Fort Jackson," said Spies. "It's been nice to have people who are formally trained in this to teach us. They've been enrolled in this MFTC for a period of time so it's good to get it from the source as to what's right and what's wrong and how to prevent injuries. They've made it applicable to the health care profession and medical students and how it can impact future care, which I would say is very beneficial."



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