

MHS Profiles

MILITARY HEALTH SYSTEM





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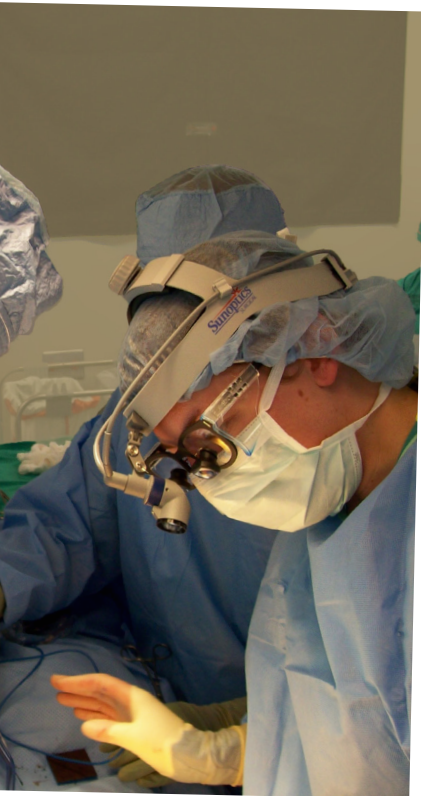
WORKING

AROUND THE WORLD

*by Megan Jakub &
Elizabeth M. Lockwood*

The Military Health System comprises many individuals committed to a common cause: providing optimal health services in support of the nation's military mission — anytime, anywhere.

In a system so large, there are different means to this same end; in other words, people can pursue very different career paths in delivering the best health resources, programs



and services available to beneficiaries around the world. There is no single, best way to do this. In fact, the success of the MHS is driven by differences in experience, expertise and talent.

People working in the MHS come from all branches, ranks and backgrounds. Some are health care providers by trade; others educators; and others researchers. Regardless of where they started, their mission is the same: They are committed to making a positive, lasting difference while improving the lives of

service members, veterans and their families.

This issue of MHS Profiles features three individuals who have done—and continue to do—just that. Air Force Maj. L. David Carnes went to the small island of Palau as a physician's assistant to deliver medical care to his Civic Action Team and ended up changing the lives of the locals there forever. Army Col. George Peoples researches breast cancer vaccines that he hopes will one day be used in the preventive fight against cancer. And Navy Cmdr. Elizabeth Hofmeister

found herself in Afghanistan, educating the Surgeon General of the Afghan National Army on best practices for building and maintaining a health system.

As Carnes, Peoples and Hofmeister demonstrate, the MHS offers a number of opportunities for individuals to provide first-class health services around the globe. Whether they choose to treat patients directly, teach the world's doctors, or discover innovative ways to prevent and treat diseases, each of these people exemplify outstanding health care in practice.





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DELIVERING WORLD-CLASS

HEALTH CARE

IN PALAU

// I wrote legislation for Palau on governing the use of physician assistants. For me, that was my best accomplishment—using my profession to help a whole nation. //

A certified physician assistant, Air Force Maj. L. David Carnes currently serves in the White House Medical Unit, a team of health care providers responsible for the health care of the President and Vice President. His present work station may be among the most recognizable in the world, but this was not always the case. Before beginning his current post with the WHMU, Carnes spent six months in the Republic of Palau, a small nation 500 miles east of the Philippines that comprises 17 different island states.

Carnes was deployed as part of a Civic Action Team that has been in place since the end of World War II. Originally a Navy project, all three services now share the work, rotating six-month deployments among Army, Navy and Air Force groups. Each team comprises 10 civil engineers and two vehicle mechanics, in addition to a medical staff member. While

there, the team builds roads and schools and improves water systems, among many other civil infrastructure projects.

As the medical lead on this 13-person tour, Carnes was primarily responsible for providing health care services to his team. “My main job was to take care of those 12 guys, which was very easy,” he explains. “So then what we did to keep our time is just [work] throughout the community.” He established a good relationship with the Palau Ministry of Health and began providing support as they needed. He quickly recognized, however, the need for medical attention and facilities on the nearby island state of Peleliu.

Peleliu, once the site of a major World War II battle that left almost 10,000 battle-torn Marines and soldiers behind on its beaches, is today a small island inhabited by only the local population.

Award-Winning Public Servant: Maj. Carnes was the first-ever recipient of the Hunter-Strickland Excellence Award in Deployed Preventive Medicine. Here, Dr. Craig Postlewaite, acting director of the Office of the Deputy Assistant Secretary of Defense for Force Health Protection and Readiness Programs, presents the award at the 2010 MHS Conference. (Photo by Caroline Deutermann)



The island relied on a single medical expert to provide care to the entire population of 600. “They lost their health care provider,” Carnes says, “so they didn’t have anybody to take care of them in that small community.” The only clinic on the island had fallen into disrepair, and as a result, medical support services on the island were almost non-existent.

Every Thursday, Carnes got on a Ministry of Health boat and took the two-hour ride to Peleliu from Palau. Slowly at first, and more quickly as they got closer and closer to finishing,

Carnes and his team of civil engineers began restoring the clinic. After removing four truckloads of trash, re-hanging doors and replacing and re-piping plumbing, the clinic was ready to open again, providing the small island with its only medical facility.

Carnes began operating the clinic once a week and providing health care to the locals. “We’d see 40 to 50 people a day,” he recalls. “We’d treat all ranges of issues—hypertension, diabetes—the gamut of medicine.” While the rest of the islands in Palau have

a very good health care system in place, Peleliu relied solely on Carnes and his re-established clinic.

“Peleliu was great, it’s where we felt the most appreciated,” Carnes reflects. “The rest of the islands...don’t really need us there, we’re just free health care. But Peleliu didn’t have anything else—they needed a boat to get to Palau for medical problems.”

While proud of his work, restoring the clinic and providing health care to the population once a week wasn’t enough for Carnes. One



Thursday, there was a diving accident on the island; as Carnes drove there to help the patient suffering from stroke-like symptoms, he thought to himself, “What were [they] going to do if I wasn’t there? Other than Thursdays, what are [they] going to do?”

To establish a group of first responders, Carnes initiated a medical education training program for local state troopers, individuals with access to some medical supplies. He took the troopers out on wilderness training trips, taught them what to do in basic emergencies, and prepared them to carry on his good work once he departed. The troopers were thrilled and continue to provide first-responder care to their island, their families and their friends.

“[The troopers] thought it was great,” Carnes remembers. “They loved to be able to fill that need. In a town of 600, they’re all family—they all know each other—so they thought it was great they were able to provide care to people.”

Aside from his work on Peleliu, Carnes also supported medical and civil initiatives on the islands of Tobi, Sonsurol and Kayangel. Among his many undertakings, he supported the installation of solar-powered water purification systems in select schools across the nation; established a radio call-in show to answer the health questions of some 20,000 listeners; and worked

with a local young “medical apprentice” who—because of Carnes’ influence—enrolled in nursing school after he returned to the United States. She expects to graduate in two years.

With a never-ending list of accomplishments, Carnes remains modest. His biggest accomplishment, he believes, was introducing physician assistant licensing to the medical board of Palau, which had never before been done. “I wrote legislation for Palau on governing the use of physician assistants and submitted it to the medical board,” he says. “For me, that was my best accomplishment—using my profession to help a whole nation.”

Time Out: Maj. Carnes takes a break from his busy schedule with (from the left) the governor of Sonsurol and the president of the Republic of Palau. (Photo courtesy of Maj. Carnes).


Healing Hands: Maj. Carnes was deployed as part of a Civil Action Team and provided medical services to both his team and to the locals. Here, Carnes was the sole medical officer for a ship that sailed to Tobi and Sonsurol—a 700-mile journey. During his deployment, he traveled to each of the 17 islands in the Republic of Palau. (Photo courtesy of Maj. Carnes).



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RESEARCHING

BREAST CANCER VACCINES



Hard at Work: *“This concept of the immune system and its ability to fight cancer has always been very intriguing,” says Col. Peoples. “It seemed like a very worthwhile thing to work on. It’s been very fascinating and very satisfying.” When he’s not researching, Peoples is the chief of surgical oncology at Brooke Army Medical Center.*



// Seeing things that you discover in the lab being translated into clinical trials and ultimately into an approved therapeutic for cancer would be the ultimate achievement. //

A cancer vaccine that can be given once and prevent all types of cancer may seem like something out of a science fiction novel, but to Army Col. George Peoples, this far-fetched dream is not only his life's passion, but it's within the grasp of his hard-working hand.

While Peoples' primary job is that of a cancer surgeon, Peoples is also chief of surgical oncology at Brooke Army Medical Center; founder, director and principal investigator of the Cancer Vaccine Development Program; and deputy director of the U.S. Military Cancer Institute.

His involvement in these organizations places Peoples at the forefront of cancer vaccine research. The USMCI works hand-in-hand with the National Cancer Institute and acts as a single repository for all cancer-related activities going on across the Department of Defense. A congressionally funded program, the USMCI will be headquartered out of the new Walter Reed National Military

Medical Center in Bethesda, Md., when it is completed in fall 2011.

Together with the CVDP, the organizations work toward a common goal: "Ultimately," Peoples says, "we could come up with a 'universal' cancer vaccine."

Peoples has been researching cancer vaccines since the early 1990s. "We've known for a long time that the immune system plays an integral role in the body's defense against cancer," he said. His job now is to find out if there is a way to harness the body's own immune system to fight cancer, and possibly prevent it from ever developing.

Cancer vaccines have traditionally been used as a therapeutic tool, meaning that they are a last resort for patients who have recurred after having undergone surgery, radiation and chemotherapy.

Peoples' research is different. It focuses on preventing recurrence in breast cancer



patients. The vaccine is being tested on women who have undergone treatment and are now disease free. Statistics show that some of these women are at a high risk for recurrence within a short period of time, creating an ideal cohort. “We have an opportunity to vaccinate

a person who has no current disease, and also has an intact immune system,” Peoples explains. “We can raise their immunity with our vaccine and try to prevent the recurrence.”

The vaccines activate the body’s existing immune

system, teaching it what to fight and how to win.

Peoples cites his first study as a sign that these methods are promising. Two hundred women participated in the study, with 100 receiving the vaccine and another 100 acting as the control group.



“In the control patients there was a 15% recurrence rate at two years. In the vaccine group, there was a 5% recurrence rate,” he recalled. “So there was an absolute 10% reduction in recurrence.” In other words, Peoples and his team of researchers prevented two-thirds of cancer recurrences in the group.

That particular breast cancer vaccine trial has just been cleared by the FDA to enter phase three: a greatly expanded cohort that receives vaccines blindly. Some will receive the new cancer vaccine, while others will receive a more generic immune stimulant. Ideally, because the cancer vaccine is targeted to activate the immune system against specific types of cancerous cells, it will be more effective than the immune stimulant. Neither doctor nor patient knows which subjects have received the active specific immunotherapy and which have received a non-specific type.

If phase three goes as well as expected, the breast cancer vaccine could be on the market in five years, approved to reduce the risk of recurrence in women who have successfully fought off breast cancer.

Peoples hopes that the breast cancer vaccines he is researching will someday be used as a preventive tool. “To see things that you discover in the lab actually being



translated into clinical trials and ultimately—hopefully in my lifetime—into an approved therapeutic for cancer would be the ultimate achievement,” he says. Once it is cleared for use as a drug that reduces recurrence, Peoples will lead the CVDP in testing it as a drug that can prevent cancer all together.

The only member of his family to either practice medicine or join the military, Peoples says that for him, without one the other couldn't exist. “One of the reasons we've been able to accomplish as much as we have is because of the military. They have allowed me to do a lot of these research activities ... and they just have incredible resources. ...I've trained in some of the best hospitals in the world.”

Family Man:

After a long day at work, Col. Peoples comes home to his wife (pictured at left) and five children. They have lived in both Washington, D.C., and San Antonio, Texas, as a part of Peoples' involvement in the Cancer Vaccine Development Program. (Photo courtesy of Col. Peoples)

Research-Driven:

In research labs like this one, Peoples and his team are working to change the outlook for patients who have undergone cancer treatment. (U.S. Navy Photo/Petty Officer 3rd Class Joshua A. Martin)



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BUILDING A

MEDICAL EDUCATION

SYSTEM FOR AFGHANISTAN



ON

// I like to simplify things and make difficult things easy for people to understand. I like to scale things down and help people get to the point. //

Cmdr. Elizabeth Hofmeister is head of the Navy Refractive Surgery Center at Naval Medical Center San Diego. An ophthalmologist by trade, she took an early interest in medical education.

As a resident at NMCSO, Hofmeister found herself having difficulty with the optics section of a mandatory standardized test. Never considering failure, she assembled a small study group of residents and presented the complicated topic to them herself. Teaching others, she discovered, helped her better understand the material.

“I like to simplify things and make difficult things easy for people to understand,” Hofmeister says. “I like to just scale things down and really help people get to the point.” That first single-session course was in 1998; today, it has expanded into a 12-part lecture series given to residents every year.

Having taught herself how to teach as a resident, Hofmeister took her love

of education with her to Afghanistan in April 2009 when she deployed with the Combined Security and Transition Command, Afghanistan, a unit chartered to mentor various segments of the Afghan National Army and the Afghan National Police. While mentors deployed with the CSTC-A specialize in many fields, from the legal system to aviation to training basic recruits, Hofmeister was assigned as a mentor to the surgeon general of the Afghan National Army, his deputy surgeon general and the surgeon general for the Afghan National Police. In this role, she was charged with helping these individuals establish an educational system that would train and prepare Afghan medical professionals to create and sustain a collaborative, interconnected health system.

After 30 years of war that interrupted education, medical practices and many other civic necessities, Afghanistan struggles to train and keep medical professionals. Hofmeister assessed the

Educating for the Future:

Cmdr. Elizabeth Hofmeister is making remarkable strides in educating military medical personnel at home and abroad. She was a recipient of the “Building Stronger Female Physician Leaders in the MHS Award” at the 2010 MHS Conference held in Washington, D.C.



Friends in High Places: *Cmdr. Hofmeister was a medical mentor to Afghan health professionals, demonstrating the echelons of care for a battlefield health care system. Here, she is pictured with Brig. Gen. Zahoor, deputy surgeon general of the Afghan National Army.*

A New Frontier: *Cmdr. Hofmeister poses with female medical students in Afghanistan. Her work helped shape the modern Afghan medical education system.*

Ready to Go: *Ambulances of the Afghan National Army. While in Afghanistan, Cmdr. Hofmeister helped review the entire military medical system, working with Afghan military medical leaders to redefine the future of their health care system.*

existing medical system and developed a three-part framework that would put Afghanistan back on track toward delivering world-class care.

First, Hofmeister's team focused on establishing a defined medical education program that would compare with programs worldwide. "[It] became clear, quite early on, that what was needed was a good education system, a good model for what an educator should be and should do," she says. "I had a lot to offer in that realm."

Working with the surgeon general of the Afghan National Army, Hofmeister suggested establishing residency

programs that would replace the existing apprenticeships that are part of Afghan medical training. "We really were trying to do a lot to help them set up their medical training programs," she says. "They didn't really have residency programs, so we were trying to help set up residency programs where they have a sustainable curriculum that they are teaching new doctors to get the medical education system in place."

Because it takes seven years to train doctors in Afghanistan, setting a realistic timeline for when the system would be fully functional was key. So next, Hofmeister focused on shaping expectations for when Afghanistan would be able to fully staff their five main military hospitals. "For a medical system that hasn't had physicians in training for decades, it's going to take a little longer than a couple of years," Hofmeister explains, "We actually need to train physicians."

The final step in the framework was determining the direction that the whole medical system would take over the next decade. A veritable roadmap for Afghan military medical leaders and their American mentors deployed to the CSTC-A, Hofmeister's vision included all aspects of health care delivery from training to policies and procedures to patient safety initiatives.





Overall the framework included short and long-term goals set to achieve actionable standards relating to nursing, infection-control and medical records. The framework is still in place today, guiding Afghan military medical leaders and their American counterparts who are working together toward a cohesive, independent medical system.

Even though Hofmeister gave so much during her time in Afghanistan—to the surgeons general of the Afghan National Army and the National Police,





to the Afghan people, and to the future of the nation's medical services—she gained even more. “Well,” she says, “I definitely gained the personal relationship[s] with these amazing people. They have such resilience to have survived and succeeded through all this war and chaos and change.”

While she advised them on military medical policy, they taught her about their people and their beliefs. “Just to hear their stories was amazing,” she continues. “I built some amazing friendships and gained a wonderful insight into the culture, religious aspects, and family life.”

That’s an understanding that Hofmeister took with her back to Naval Medical Center San Diego when she returned in December 2009. “My time there took [the country] from being just a news story on the 6:30 news to [something more]: Here’s what the issues really are and here’s the problems they really have to deal with.”

The cultural respect shared between Hofmeister and the people she worked with is just as important as the medical lessons taught. Long after the Afghan medical system is on par with the best in the world, Hofmeister’s legacy will still stand: an indelible bridge to peace.

Always a Teacher: *Back home after her deployment to Afghanistan, Cmdr. Hofmeister teaches a course titled “Top 10 Patient Safety Tips for Refractive Surgeons” at Naval Medical Center San Diego.*



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LEADING

THE WAY FORWARD



Carnes, Peoples and Hofmeister are indicative of the kinds of people who work within and for the Military Health System. They are wholly committed to the work they do because they understand its value and importance.

“It’s something that we feel very passionate about,” Peoples says. “I’m sure as you talk to people in the Military Health System...we are really here because we want to be here. This is the type of work that we want to do. It’s an absolutely outstanding system.”



These three people, and others like them, are paving the way forward for the MHS. Their work is informative, innovative and impactful. It has lasting implications for the global health community that will continue well into the future.

Every day in the MHS, regular people prove to be heroes. The doctor who treats a patient for diabetes; the professor who teaches his students techniques for practicing medicine in the field; and the educator who devotes her research to fighting childhood leukemia. They are all part of a health system focused specifically on patient care, and providing that care whenever and wherever possible.



Though their work is very different, Carnes, Peoples and Hofmeister share a commitment to the military and a commitment to health care delivery. And every day, in different ways, they succeed. ■





coming next on health.mil

The next issue of MHS Profiles will explore the U.S. Military's quest for a globally effective **malaria vaccine.**