

# Navy Medicine

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## FIGHTING FOR REDEMPTION

Corpsman boxes for Navy 28

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# Navy Medicine

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##### SUBMISSION REQUIREMENTS:

Articles must be between 600-1,000 words.

All articles must be present tense/active voice.

Photos must be minimum 300 dpi.

Photos showing action are preferred.

All photos must be accompanied by a caption and photo credit.

##### Subjects considered:

**Scuttlebutt:** Stories about activities at MTFs and the field.

**Photo Album:** Action shots from across Navy Medicine.

**Feature Articles:** Stories featuring interesting contributions of Navy Medicine to military operations including everything from combat support to Humanitarian Relief/Disaster Response will be considered.

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**R & D and Innovations:** Any new processes and/or research and development news.

**Quality Care:** Anything that improves the quality of care for our patients.

**IT, QA:** Any articles showing how Navy Medicine is utilizing the electronic age.

**Shipmates:** Anything interesting about our shipmates working in the healthcare field in the Department of the Navy.

All submissions must be accompanied by complete contact information for author. In the event there is more than one author please assign one author to be primary correspondent.

#### Feedback Welcome

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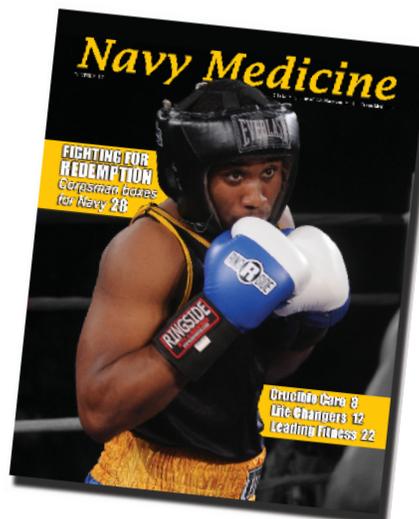
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### On the Cover

Hospital Corpsman Brandon Wicker will represent the All-Navy Boxing Team in the 178-pound weight class at the Armed Forces Boxing Championship. The annual event will be hosted by the Marine Corps and held at Camp Pendleton, Calif., in the end of January. (Photo by Mass Communication Specialist 2nd Class Elliott Fabrizio)

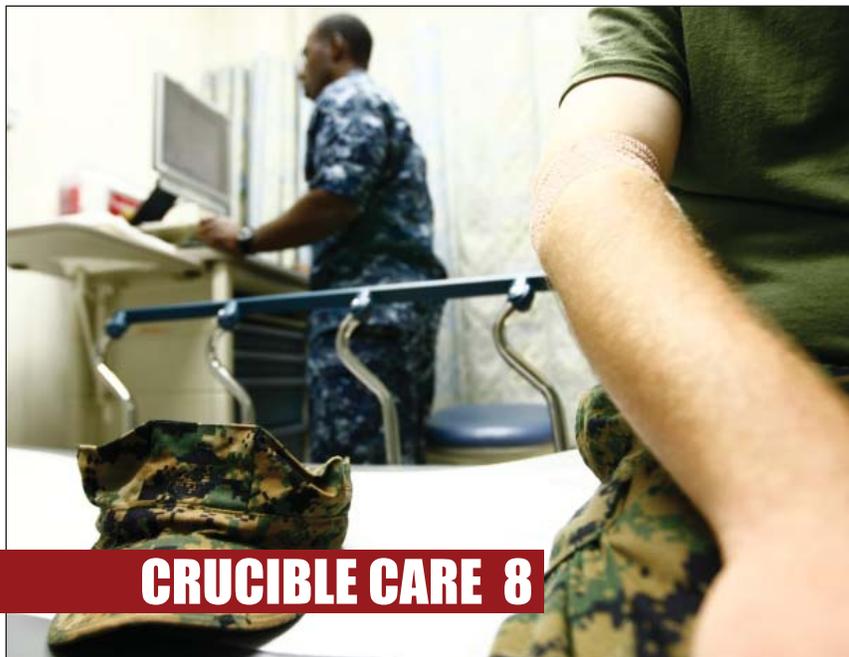
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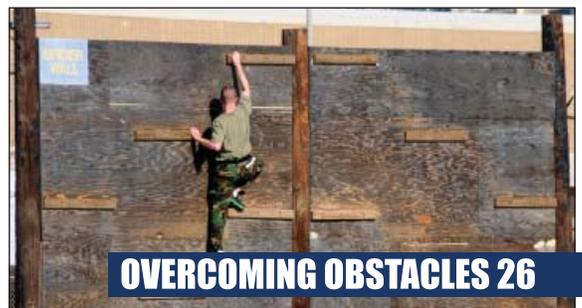
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# Ready to Answer All Bells in 2012 and Beyond

**T**he continuing assessment of the global demand signals coupled with fiscal realities has allowed both renewal and reshaping of strategic directions. I am confident that Navy Medicine is strong and is ready for the numerous challenges and opportunities ahead of us in the New Year. My goal as your new Navy Surgeon General is to foster a culture of leadership at our headquarters in Washington, D.C., that leads and is responsive to your issues whether you serve at a medical treatment facility, on the deckplates of our warships or the battlefields around the world to maintain our ability to provide world-class care ... anytime, anywhere.

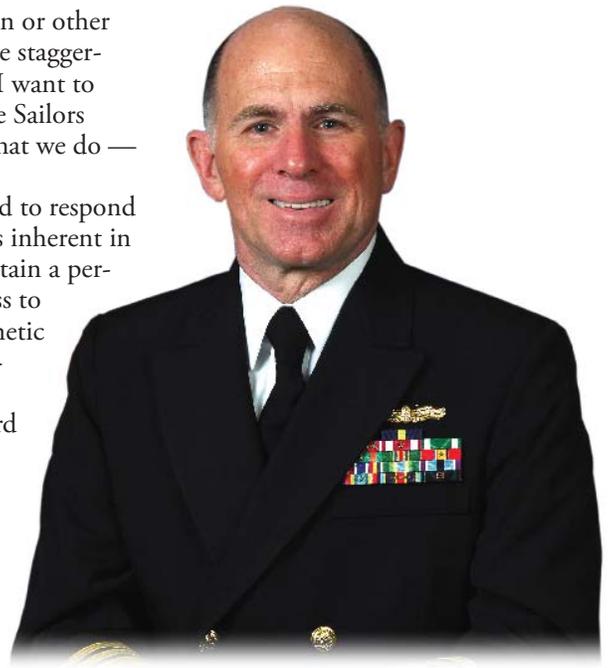
We live in dynamic times but we must remember that support to the warfighter and their families is our top priority. As such, it is even more vital that we align our medical capability with the strategic imperatives and direction of the Chief of Naval Operations and the Commandant of the Marine Corps. It is the responsibility of our leaders, myself included, to take their direction and vision and implement it into what we do each day around the world.

As we move forward, it is paramount that we also take a moment to look back and remember the sacrifices of the brave men and women of Navy Medicine have made during the past decade of combat operations. More than half of Navy personnel wounded in action and nearly one-third of those killed in action during these conflicts have been Navy

Medicine, whether corpsmen or other medical personnel. These are staggering numbers and ones that I want to highlight and honor as these Sailors represent the very best of what we do — service and sacrifice.

The ability to be prepared to respond to the needs of our nation is inherent in our ethos. We need to maintain a persistent state of high readiness to support everything from kinetic action to humanitarian missions. One key to enhanced readiness as we move forward will be to find new ways to export lessons learned and best practices from our larger medical centers to our smaller health care facilities throughout the Navy Medicine global enterprise. Navy Medicine's hallmark has always been we are already there or we get there soonest! When the world dials 9-1-1, it is not to schedule an appointment, and I am proud of the Navy and Marine Corps team and our role in leaning forward in this effort.

The future is indeed bright for Navy Medicine. We have a international footprint which is an important part of our nation's diplomatic presence around the world. Navy Medicine is forward deployed with our warfighters overseas and our research units with our resident scientists providing a global health benefit around the world. Our personnel serve as ambassadors worldwide and are the heart and soul of the U.S. Navy as a



“Global Force for Good.” Our work is also a key enabler of the maritime strategy in terms of direct support to the warfighter and our role in humanitarian assistance/disaster response missions. When our naval forces go forward into harm's way, we will be beside them as we have always done and be ready to care for all on-scene and when they return.

I am encouraged by the opportunities and the shaping that will occur as Navy Medicine moves forward through 2012 and beyond.

*--Vice Adm. Matthew L. Nathan*



# Continuing a Legacy and Future Strategies

Shipmates,

Few military organizations can look upon their past with the same degree of satisfaction as can members of the Navy Hospital Corps. For greater than a century, the Hospital Corps has supported the Army, Navy, Air Force and Marine Corps whenever and wherever necessary. During peacetime, they provide amazing care and support, to our service members, retirees, and family members. In times of war, they serve alongside our military's warriors on the battlefield, transport our wounded by air, serve on Afghanistan Provincial Reconstruction Teams, and deploy on every platform in the Navy's arsenal.

Over the years, we have seen countless examples of heroism, during which hospital corpsmen have willfully exposed themselves to danger to save lives. These ordinary men and women, who do extraordinary work, give freely and willingly in service of their country and are truly the backbone of Navy Medicine. In every chapter in our military's history, the Navy's hospital corpsmen perform above and beyond the call of duty.

As 2012 begins, it is a good time to reflect on the past year. We witnessed the completion of the Medical Education and Training Campus (METC) in San Antonio and the ribbon cutting of the Walter Reed National Military Medical Center (WRNMMC). Each facility is iconic in its own right; one the largest educational consolidation in the record of the U.S. military and the other, the most complex integration, construction, and renovation project in the history of the Department of Defense. Additionally, the Nation watched our Navy deploy in support of Operation Tomodachi and Continuing Promise, and finally we saw the last warrior redeploy from Iraq. As we continue to project into the future, our focus must be relevant in maintaining our focal point on three fundamentals: Training, Readiness and Leadership.

Each history defining moment could not have been accomplished without the dedicated individuals of Navy Medicine and the continued training of our Navy Medicine personnel. METC opened its doors in San Antonio and serves as the primary entry portal for Army, Navy, Air Force and Coast Guard enlisted medical trainees. METC's scope is 64 programs of instruction, more than 8,000 students of all services on any given day, nearly 24,000 annual students throughout and more than 1,400 staff and faculty. The Navy Medicine Training Center (NMTC) is the Navy's service component to the METC tri-service organization. NMTC's scope is 33 programs of instruction, to include the new HM "A" School, more than 2,800 students on any given day, more than 6,000 annual student throughput and nearly 530 staff and faculty. Since METC inception, doors to the new Hospital Corpsman "A" school on April 27, 2011, and to date, has trained over 2,800 new HMs ready to deploy in support of the Fleet. Overall, 93% of Navy medical training courses are now located in San Antonio.

Navy heritage is alive and well in San Antonio. I cannot be more proud of our Sailor's accomplishments in making the move from Great Lakes a success. The education and training our Sailor's receive at our training centers is one building block in their career. We must capitalize on this building block as they transition from training to the performance of their duties becoming a vital part of the command's readiness capabilities.

I measure readiness as the ability of a military unit, such as a carrier battle group or the medical battalion's capability of accomplishing its assigned mission. Logistics, available spare parts, training, equipment, and morale all contribute to the Sailor, command and the Navy's readiness. Our Navy recognizes four grades of readiness. At the highest



level, a unit is prepared to move into position and accomplish its mission. At the lowest level, a unit requires further manpower, training, equipment, and/or logistics to accomplish its mission. What is your and your command's readiness level? Are you ready to deploy tomorrow if needed?

Education, training, and readiness are separate focus areas but must be a cohesive process. Our leadership must understand how each work, and how they work collectively. We must continue to develop our skills, train as we fight and remain always ready to deploy. No one will ever fully master the art and science of our craft, because it is constantly changing and developing. We must commit ourselves to a career of learning and being ready. Only through this process can we do justice to the expectations of those who place their lives into our hands. The only conceivable way to accomplish these undertakings is ensuring leadership is in place.

As leaders, we must provide feedback to the training facilities to ensure our Sailors are being taught relevant and current training curriculums. Leadership needs to be aware of and engaged in the feedback process to our training centers.



The U.S. Navy Bureau of Medicine (BUMED) Force Master Chief Sherman E. Boss, volunteers to receive an IV from a student, his first and successful “stick”, during a tour of the Basic Medical Technician/Corpsman Program (Corpsman A School) training lab at the Medical Education & Training Campus (METC). (Photo by Lisa Braun, METC Public Affairs)

The leadership at the training center cannot do this alone. Job Task Analysis and Post Graduate Feedback Surveys are important tools in the process and should be viewed as a top priority. It is a team effort to keep our training relevant and up-to-date.

Leadership is the life-blood of our organization. Leadership must be aware and knowledgeable of current organizational, Naval, and DoD policy and guidance. Our most precious commodity is our people, and in order to keep and develop this commodity, we must have a strong grasp of policy. Chief Petty Officer 365 training is an effective way to ensure our leadership stays focused and sharp. A robust chief training program continues to be the bedrock of a strong Chief’s Mess.

At the heart of every successful command is a strong Mess. This is a century old fact. Chiefs must be engaged and

aware of their surroundings, at work or on liberty. They must make the right choices not only for themselves but for those they lead. It is a heavy responsibility to be a chief petty officer, but we gladly carry it. We must strive to better not only the Sailors we lead, but our superiors and ourselves. I need every Chief to not only focus on day-to-day operations, but also on the future and where we are headed.

We are a community of multi-tasked leaders, managers and technical experts; the one true physical link between the wardroom who supplies the vision and direction and the deck plate Sailor who possesses the training and expertise necessary to make those plans a reality. Every chief has the skills that enable us to serve our Navy proudly in whatever capacity needed. There has never been, nor will there ever be, an acceptable substitute for a face-to-face talk between

a chief and a junior Sailor who is concerned about their family, their career or their education. There is no one better qualified than a chief to tutor a junior officer on what it takes to properly care for that young Sailor.

As we enter a new chapter in military medical history, there is much to think about, we will face new challenges and opportunities, but as I tell all who will listen ... there is no team in the world better prepared, motivated, or professional to take us to the next level. I am humbled to be your Force Master Chief and a member of the Hospital Corps, proud to call each of you my shipmate and look forward to our future together as our Surgeon General, Vice Adm. Matthew Nathan, takes the helm of Navy Medicine.

*-- Force Master Chief  
Sherman E. Boss*

# Crucible Care

By Regena Kowitz

Naval Hospital Beaufort, S.C., Public Affairs

Most people think of Beaufort, S.C. as a sleepy Southern town with oak-lined streets and wide porches where people sit sipping sweet tea in the summer heat. While all that is true, the area is also home to Marine Corps Recruit Depot (MCRD), Parris Island where more than 20,000 new U.S. Marines are made every year. And, where there are Marines, you'll also find Navy Medicine.

While drill instructors are busy making new Marines, staff at Naval Hospital Beaufort's Branch Health Clinic (BHC), Parris Island are ensuring those Marines are healthy and teaching junior corpsmen what it means to be a "doc." For many corpsmen, BHC Parris Island is their first stop after Hospital Corps "A" School, and they still have plenty to learn.

"Sailors assigned to MCRD must quickly adapt to the arduous duties of Parris Island," said Chief Hospital Corpsman Daniel White,

leading chief petty officer for Recruit Medical Readiness. "Newly reporting Sailors must learn a vast array of medical skills including venipuncture, immunizations, medication administration, urine analysis and administrative screening."

Within 48 hours of arriving at boot camp, recruits get their first dose of Navy Medicine and have their first encounter with hospital corpsmen.

Over the next few days, recruits are medically screened to ensure they're physically fit to begin 13 weeks of rigorous training. Anywhere from 300 to 1,000 recruits arrive nearly every week, so on any given day, the clinic is packed with hundreds of new recruits, each relying on the corpsmen to help them navigate the screening process and make their first encounter with Navy Medicine a positive one.

At the clinic, properly trained corpsmen



administer immunizations, draw blood, and collect DNA samples. Recruits also undergo eye examinations and if glasses are required, corpsmen fabricate them onsite and issue them that very day. Last year, corpsmen made 9,925 pairs of glasses.

The corpsmen at dental's recruit in-processing facility (RIF) coordinate dental exams, take radiographs, and create dental records for every recruit. For the first ten months of 2011 alone, corpsmen processed over 16,000 recruits in the RIF. The BHC corpsmen all learn how to operate efficiently in a fast-paced clinical setting,

while providing the highest quality medical care.

Once in-processing is done, training begins in earnest for the recruits. At MCRD, each of the four training battalions has its own dedicated battalion aid station (BAS), staffed by a licensed provider, an independent duty corpsman (IDC) and several junior hospital corpsmen. When recruits get sick or injured, which happens frequently due to close living quarters and intense physical activity, the BAS is the first stop for their health care needs. Stocked with physical assessment equipment, medical sup-

**A recruit is cared for by a hospital corpsman assigned to the Branch Health Clinic Parris Island Acute Care Area (ACA). Corpsmen work under the supervision of an emergency room physician to assess and treat recruits for all manner of illnesses and injuries, ranging from heat soft tissue injuries to pneumonia. (Photos by Lance Cpl. Michael Rogers)**



**Fresh out of Hospital Corps "A" School, Hospitalman Garret Williams, puts to use the assessment skills he is learning as a junior corpsman assigned to the Acute Care Area (ACA) at Naval Hospital Beaufort's Branch Health Clinic (BHC) Parris Island, S.C. Newly reporting corpsmen assigned to the BHC will undergo an extensive qualification process to ensure they have a full understanding of emergency response and sick call screener's procedures.**

plies, and a small pharmacy, the BAS has everything necessary to treat common ailments.

Typically, 30 to 130 patients are seen in the BAS each day, providing ample opportunity for corpsmen to learn everything they ever wanted to know about sick call and taking care of Marines under the eye of an experienced IDC.

"Since I've been here, I've learned how to properly view an X-ray and the different tests to perform on patients with musculoskeletal injuries," said Hospitalman Marshall Reis.

"Working with experienced providers on Parris Island has helped me become a better corpsman and prepared me for future assignments."

One of the most physically and mentally

demanding evolutions in recruit training is the Crucible. During this three-day event, recruits navigate obstacle courses, participate in martial arts events, and march endlessly, often with minimal sleep. Due to the intensity of this exercise, the potential for injury is increased and Crucible Aid Station (CAS) corpsmen are trained to keep recruits healthy and respond to emergencies during these grueling events.

"In addition to treating recruits in the field, we have a 14-bed casualty receiving facility where we can treat patients and return them to training or stabilize them for transportation to the clinic or hospital for further evaluation," said Hospital Corpsman 1st Class Daniel Fla-



herty. “We treat everything from blisters and blunt trauma to broken bones and hyponatremia. Crucible corpsmen work long, hard hours during this 54-hour event, but when a corpsman leaves the CAS, they’re ready for anything.”

If a recruit becomes injured or ill beyond the capabilities of a BAS to treat, they are taken to BHC Parris Island’s Acute Care Area (ACA) for more comprehensive care. ACA staff arrive daily at 5:30 a.m., well before the rest of the clinic, to ensure shelves are stocked, rooms prepped, and the ambulance ready to go because they never know what the day may bring.

During the summer, when Parris Island sees sweltering temperatures, heat casualties can be a common occurrence and corpsmen are well-trained to help manage them. The ACA is outfitted with a “cold room” containing two ice beds, a hurricane fan, a tub of ice, a shower, and plenty of IV fluids. As heat cases arrive, corpsmen work quickly to strip them down to PT gear, start IVs, draw labs, and reassess their temperature to make sure no one goes into an

ice bed who doesn’t need to be there.

In the ACA, corpsmen work with an emergency room physician to learn how to assess and treat acute patients. In addition to learning how to properly treat heat injuries, corpsmen learn to manage pneumonia, dress wounds, suture, and perform minor surgical procedures.

“Before we send our corpsmen to operational units, we ensure they have the tools they’ll need to succeed,” said Master Chief Hospital Corpsman Brad Kowitz, senior enlisted leader for branch clinics. “Specifically, they will all go through an extensive qualification process including practical examinations on emergency response and a sick call screener’s course that provides them the clinical basics to conduct routine physical examinations.”

When a corpsman leaves the idyllic Southern charm of Beaufort for their next duty station, whether it’s for the steel gray of a destroyer or the blistering heat of a desert, they can be certain they’ve earned the name, “doc,” having been tried and tested in their own version of the crucible. 🌐

**Hospital Corpsman 3rd Class Jeremy Jones inspects a pair of sturdy brown plastic S-9 frames as he prepares to make eyewear for dozens of new recruits at Branch Health Clinic MCRD Parris Island, S.C. (Photo by Lance Cpl. Michael Rogers)**

# Life CHANGERS

Story and photos by Hospital Corpsman 1st Class Jonothon Tarkowski  
Uruzgan Medical Department lead petty officer

**R**esting at the base of a mountain range in the heart of the Uruzgan Province is AWI Upper, a village in the Chora District of Afghanistan. Like most towns in Afghanistan this one is small, it has a population of approximately 300, and is rich in history. Families proudly trace their ancestry back for hundreds of years and recall various hardships the people have dealt with over time such as during the Soviet invasion when the Afghani people were fighting for their freedom and their own village was the center of intense fighting.

Tradition is important to the people of AWI Upper. Like their ancestors before them, most families depend on farming for their survival. The village looks like many others and is dotted with small gardens, apricot trees and almond orchards, which are staples of life. The men tend the fields and care for the orchards while many small children can usually be found carrying water from and playing along the fresh mountain

stream that supplies the community with much needed water. As is common in many villages in Afghanistan, people in this town live a simple and meager life. The local farmers' gross income is equivalent to about four American dollars a month and is used to purchase needed items at local bazaars such as food, clothing and medicine.

Medicines available are minimal and advanced medical care is a luxury most of the small villages in Afghanistan do not have. When a person requires more advanced medical attention, they see the one villager who is trained in the basics of health care. In the AWI Upper community that person is an elder named Momadia Sha who operates a medical clinic with minimal supplies and equipment. The closest medical doctor with more advanced, formal training is in the district health center located in the town of Chora, 15 miles away. For local people needing more complex medical attention this means having to travel for four hours either on foot or donkey through the open desert, which covers most of Afghanistan, just to get there.

In an ongoing effort to assist the people of Afghanistan, including those



in small remote villages, The International Security Assistance Force (ISAF) has placed special teams known as Provincial Reconstruction Teams (PRT) in the country. The primary goal of the PRT's is to build local support for the Government Islamic Republic of Afghanistan (GIROA) and their charter missions are to aide with improving the quality of life for the communities and provide funding for projects, which local government officials deem necessary. Each Provincial Reconstruction Team is comprised of members who work in various specialty fields such as construction, translation, medicine, etc. When a person in one of the local neighborhoods needs assistance, it is common for them to look to members of the recon-



**The Uruzgan Provincial Reconstruction Team stationed at Forward Operating Base (FOB) Mirwais, co-located with the Second Kandak Afghanistan Army, assisted in getting an Afghani boy a life-changing operation.**

struction team for guidance and help.

During a routine mission to complete a site survey for a pending project in AWI Upper, the Uruzgan PRT stationed at Forward Operating Base (FOB) Mirwais, co-located with the Second Kandak Afghanistan Army, was approached by the local medical provider Momadia Sha with an unusual but severe medical issue. A local farmer, Mohamed Ramin and his 10-year old son Moutula had recently visited Sha seeking medical treatment. Moutula was having severe distress while trying to urinate. Sha recognized this case was above his training and requested the team

medical provider to please give whatever medical assistance he was authorized to supply.

The PRT Uruzgan Chorah detachment medical provider, spoke with the father and suggested he take his son to see Dr. Habib at the Chora Health Clinic for treatment per the standard operating procedures adopted by the Afghanistan Ministry of Public Health. Two days later Ramin and Moutula arrived at FOB Mirwais requesting to see the PRT. At that time, Ramin detailed at length what was wrong with his son and the long, ongoing process he continued to go through in a desperate effort to get

medical attention for Moutula.

Ramin explained that his son was not circumcised at birth. While lack of circumcision typically does not contribute to adverse medical issues, there are occasions when the urethra grows shut and urine is unable to pass freely from the body. When this happens, the condition is known as Urethral Meatus and it requires plastic surgery to correct. This is what happened in the case of Ramin's son; when Moutula was eight years old his urethra opening grew shut. Post closure a small perforation eventually erupted where the urine stream should freely leave the boy's body causing con-



**Mohamed Ramin and his 10-year old son Moutula received assistance from a Provincial Reconstruction Team in Afghanistan to get the boy a surgery to correct a condition known as Urethral Meatus, in which urine is not able to flow freely from the body.**

stant intense pain for him. In 2009 a local tribal elder attempted to help the family by donating enough money for the boy and his father to visit the Kandahar hospital to seek treatment. While there, Ramin had to face being told the staff at the hospital did not have the ability to correct his son's urethra disorder. They advised Ramin he would have to take his son to Pakistan where the plastic surgery could be performed at the family's cost. Knowing this was not an option, Ramin sought out assistance for his son at the Tarin Kowt Hospital in the provincial capital of Tarin Kowt. There he was advised to seek treatment in the Kandahar Hospital and possibly the main Afghanistan Hospital in the

capital of Kabul. Ramin took his son to the various hospitals only to hear the same thing every time – the boy was not going to be able to get the surgery he needed unless he went elsewhere and the family paid for it.

Moutula stated during their visit that he only drank enough water daily in order to survive due to the overwhelming pain caused by not being able to freely urinate. Ramin said he took his son to see Dr. Habib at the Chora Health Clinic and was told he was not able to care for the young boy as his condition required plastic surgery which he was not able to provide at this time.

Ramin is a typical Afghani farmer from a small village who barely earns

enough money to feed his family of eight, much less pay the cost to visit the various hospitals for his son only to be told no one can help him or for surgery. After conveying his story to the PRT, Ramin and his son left the FOB Mirwais to return to their home.

Knowing the young boy was barely surviving and in constant pain for a couple of years and contemplating what resources may be available, The Provincial Reconstruction Team at FOB Miriwais, Chorah district reached out to other parts of the PRT to find what further assistance was available. A civilian member of the Australian PRT and AUSAID employee was able to assist by contacting the many NGO's

in the region and the CURE International Hospital in Kabul which is a non-profit organization dedicated to helping women and children around the world. It was hoped the CURE International Hospital would be able to assist Moutula. Since 2005, generous financial donations and staff donations of time and expertise have allowed the CURE International Hospital in Kabul to actively treat approximately 55,000 patients and perform 2,000 surgeries annually. Subsequent to several emails and numerous telephone conversations with CURE International Hospital, a surgeon was successfully found in Kabul that could perform the plastic surgery to correct Moutula's condition.

The next hurdle was to find a way to pay for the surgery. The surgery was scheduled for Sept. 4, 2011, leaving five days to raise the funds needed for the boy and his father to reach the hospital in time for the surgery. While the PRT'S AUSAID staff was coordinating with the NGO's to pay for the surgery, members of the PRT Uruzgan team at FOB Miriwaits in the Chorah district generously donated enough money to provide transportation and food for the father and son.

Moutula and his father would not have an easy trip in going to Kabul from their small village of AWI Upper and back. Reaching the capital of Afghanistan is not a simple task. The father and son taxied from AWI Upper to Tarin Kowt and then boarded a bus to Kandahar where they spent one night and then boarded another bus for another day-long trek through several dangerous mountain passes and villages before arriving at the capital of Kabul.

While waiting to depart for his surgery, Moutula continued his education in one of the only functioning schools in the Chora district. He is in the fifth grade and excels in his studies which consist of learning English and mathematics. Moutula hopes to one day be an engineer and help his poor village

and country.

Moutula and his father arrived back at FOB Miriwaits on Sept. 14 to relay the story of his journey to Kabul and thank the many individuals who helped him get the surgery. He was all smiles from ear to ear as he greeted the PRT members. He told the story of the long taxi ride from AWI Upper to Tarin Kowt, followed by the night's stay in one of the many small rooms for rent close to the bus stop. As the ride to Kandahar began he was anxious since this is the farthest he or his father had ever been from home. The bus ride from Kandahar to Kabul had its ups and downs as the bus was forced to stop several times due to heavy fighting among the Taliban and Coalition forces near the Warzack Province. Forced to stay on the bus during a two-day delay in Warzack, Moutula was ready to get out and stretch his legs as they reached Kabul.

Checking into CURE International Hospital they were greeted by the friendly staff and the many beautiful gardens. His surgery was performed by a French Plastic surgeon, who volunteered his time and expertise to

help the many patients of the hospital. "Two days after my surgery I was up and around playing among the gardens with the other children who were also patients" said Moutula. His father was able to stay in one of the many rooms for parents of the other patients. Ramin said "After the surgery and while Moutula was recovering I was able to visit the capital of our nation, a first for me and one I will not forget." During his stay in the hospital he had a chance to meet many other children from all across his country, making friends in far away providence's in hopes to one day visit them.

Moutula has fully recovered and was ready to get back into school and be able to run and play with his friends without any pain or discomfort. His heart warming smiles were the best form of gratitude for the members of the PRT. A true bond of friendship has been formed with the family and the PRT members. "Just knowing that we were able to help a young Afghan boy is satisfaction for the long hours and many nights away from our own families" said Chief Petty Officer Van Gemert. 🌍

**“Just knowing that we were able to help a young Afghan boy is satisfaction for the long hours and many nights away from our own families.”**

- Chief Petty Officer Van Gemert,  
Provincial Reconstruction Team Member

# Making Every

By Douglas H. Stutz

Naval Hospital Bremerton Public Affairs

**“M**ake every day a healthy day” was the theme of Naval Hospital Bremerton’s (NHB) Health and Wellness Fair held Oct. 26. There were interactive static displays, informational tables and inventive kiosks covering such interests as injury prevention awareness and strategies, cardiovascular and strength fitness, nutritional and dietary information, and providing basic tips for healthy lifestyles.

“This event was targeted primarily to our staff members,” said Janet Mano NHB Health Promotion Coordinator. “Our hope is that by reminding and sharing what we have here, our staff will then use what has been passed on for themselves, and then in turn, share with their family as well as their patients and beneficiaries. We hope the infusion of information about the preventive side of health will continue to make a positive impact with their personal habits and with their patient encounters.”

For Mano and her dedicated staff, the Health and Wellness Fair provided a viable

and visual way to continue their on-going awareness campaign against such unhealthy habits as sedentary lifestyles, heart disease, coronary artery disease, obesity, diabetes, high blood pressure, strokes and tobacco-related cancers and illnesses.

“We’re really just helping health care providers take care of themselves just as they help take care of others,” Mano said. “We have the resources, information and motivation to emphasize prevention and the knowledge gained by our staff can then be shared with their patients. Our Health and Wellness Fair is always a



# Day Healthy

great opportunity to make many of our experts available to our staff, such as our dietitian and members of our physical therapy staff.”

On hand were a number of specialists in their respective fields such as physical therapists, fitness leaders, registered dietitians, tobacco cessation coordinators, and dental technicians. Some of the featured displays included Physical Therapy’s “Getting to the Core” training; Morale Welfare and Recreation programs and services for Navy Region Northwest; dental health updates, and Fleet and Family Readiness information. Shared discussions touched upon such topics as “Healthy Eating with Quick and Delicious Meals,” “Diabetes Self Care,” “Staying Healthy with Preventive Care

Guidelines,” and “Tobacco - Quit for Good.”

Navy Fitness Leader Bobbi Sharp, from Naval Base Kitsap-Bangor gym, demonstrated Navy Operational Fitness and Fueling Series (NOFFS) workouts in the Wellness Center classroom.

NOFFS is the Navy’s new “functional movement” training that combines human performance with injury prevention strategies.

Using the latest sports science methodologies, the “Operational Fitness” portion of NOFFS combines performance with injury prevention strategies, resulting in safer training while yielding positive outcomes. Exer-

cises are designed to replicate the activities Sailors conduct carrying out their range of duties: lifting, pushing, pulling and carrying.

According to Sharp, NOFFS was originally designed for active duty, but has since branched out to also include family and retirees on varied options for a full-body workout. “It’s not so much fitness challenge as fitness awareness,” she said.

There are tailored exercises for those assigned to submarines, surface ships, large deck platforms, and even for group participation physical readiness training. The programs are designed for real-world space and equipment limitations,

and each one provides three different levels of exercises that are based on current fitness and capability.

“The exercises designed depends where a Sailor is assigned and what’s available,” Sharp said. “Serving on a sub, with limited space, is obviously different that being assigned on an aircraft carrier.” The routines are



Physical Therapy department’s “Getting to the Core” class featured not just explanations to those attending Naval Hospital Bremerton’s Health and Wellness Fair, but also offered hands-on experimentation opportunities to combine core strengthening with balance and flexibility drills. (Photos by Mass Communication Specialist 1st Class (SW) Charlemagne Obana)



During Naval Hospital Bremerton's Health and Wellness Fair held Oct. 26, Hospital Corpsman 1st Class (SW/AW) Adam Cerullo, Physical Therapy Assistant Leading Petty Officer, performs an exercise using the TRX suspension trainer under instruction by TRX certified Naval Base Kitsap Bangor Gym Fitness Specialist Bobbi Sharp.

based on five areas of concern – pillar strength (hip, core and shoulder); movement, strength, cardiovascular and flexibility/recovery.”

According to the NOFFS background guide, the program was designed to provide the Navy with a “world class” performance training resource for fleet Sailors as well as Navy health and fitness professionals. The bottom line is having a dynamic, flexible exercise method available for improving the operational performance of Sailors.

“NOFFS is very user-friendly and the Health and Wellness Fair is a great way to introduce the program not to just

active duty but also family and retirees,” Sharp said.

Proper nutrition and diet are also a vital part of fitness. Dieting is much more than simply counting calories and NHB has dedicated staff members available to share in-depth information on mapping out a personal nutrition and diet strategy.

According to Cmdr. Kim Zuzelski, NHB nutrition management registered dietitian and director for administration, registered dietitians in all branches of the armed forces are being increasingly recognized for their contributions in enhancing human performance of

servicemembers.

“Men and women in the armed forces work under extreme conditions. Those in combat settings are termed ‘tactical athletes’ because their training and work is very demanding with unique challenges for fueling and hydration that are akin to the demands of athlete performance. Much of the research on sports nutrition can be, and has been, applied to the military arena. In turn, research conducted by the military on hydration and dietary supplements has been applied to recreational and elite athletes,” Zuzelski explained.

The NOFFS ‘Fueling’ aspect strongly

supports the work of Navy registered dietitians like Zuzelski by providing Sailors the tools required to make healthy nutrition choices from ship to shore to operational environments. The NOFFS Nutrition strategy "10 Nutrition Rules to Live By," offers basic guidelines to follow to achieve sound eating habits. They are;

1. Come back to Earth - Choose the least processed forms of food such as; fruits, veggies, whole grains, and high fiber carbohydrates.

2. Eat A Rainbow Often - Choose a wide variety of colors of food for the biggest benefit. Eat fruits or vegetables with each meal.

3. The Less Legs the Better - Include a lean protein source with each meal.

4. Eat Healthy Fats - Include healthy fats in your diet like olive oil, nuts, natural nut butters, seeds, avocado and fish.

5. Eat Breakfast Every Day - When you eat within 30 minutes of waking up, you jump start your metabolism. This gives you more energy to get your day going.

6. Three for Three - Eat smaller portions more often, spread evenly across the day. No excuses – you should be eating four to six meals/day. Aim for all three macronutrients (carbs, protein, and fat) every three hours for optimal fueling.

7. Stay Hydrated - Dehydration = Decreased Performance. Drink at least three liters of non-caloric beverages (water/green tea) every day.

8. Don't Waste Your Workout - Have a post-workout recovery meal or shake that combines both carbs and protein immediately after your training.

9. Supplement Wisely - Fuel first and supplement second. If you are not getting what you need through food, add a multivitamin supplement into your daily routine. Create a smart supplementation program that improves your performance without compromising your health or draining your wallet. Before you take any type of supplement, make sure to check in with your doctor or registered dietitian.



**Susan Yake, NHB clinical nutrition dietitian, goes over nutrition strategies and healthy eating guidelines with active duty staff members as well as retirees and beneficiaries.**

10. Sleep - Aim for eight hours of sleep. If you can't get eight hours daily, consider power naps when you can. The body recovers and repairs best when it is sleeping.

Mano attests that by sharing such information as what NOFFS has to offer, the true success of the Health and Wellness Fair extends far beyond the one-day event.

"One of the most important ways we gauge feedback is by noticing an

increased in classes we have on a regular basis," Mano said. "After an event like this, we always see more staff members coming to our Tai Chi and Yoga classes, as well as our informational sessions for Nutrition and Weight Management. By getting to know the resources, they are then better informed to share information on diet, exercise, medications and self-monitoring with our beneficiaries and patients. That's really what it's all about." 🌐

# NMSC Mitchell Center



Pictured is a drawing from a Mitchell Center patient. The center is dedicated to documenting and determining long-term effects of war-time incarceration on U.S. military, civilian and contracted U.S. employees spanning nearly 40 years.

## From Navy Medicine Support Command Public Affairs

Medical professionals at the world's only center for the long-term study of the Prisoner of War (POW) experience were recognized by Pensacola-area former POWs during a luncheon at the Heritage Hall in Pensacola, Fla. this fall.

Retired Navy Capt. Allen Brady was one of the honorees during the 13th annual

POW/Missing in Action (MIA) luncheon, sponsored by the Pensacola Chapter of Freedoms Foundation at Valley Forge, the Pensacola Chapter of the Navy League and the Navy Federal Credit Union.

According to the Navy Operational Medical Institute's (NOMI) Robert E. Mitchell Center for Prisoner of War Studies executive director retired Capt. Robert E. Hain, although National

POW/MIA day is observed annually Sept. 16 in the United States, remembering the sacrifice these men and women have made is paramount.

"Remembering the sacrifice these service members have made is with us on a daily basis," he said. "So many have suffered terribly. They are our true heroes."

Brady, who spent 74 months incarcerated during the Vietnam War, ejected from an A-6 medium attack bomber at a speed of more than 450 knots in January 1967, sustaining multiple injuries. While incarcerated, he was exposed to lengthy torture sessions and suffered from multiple untreated diseases. Hain said Brady's will and devotion to duty proved instrumental in his survival.

"Still today, [Brady] is grateful that he was able to serve his country with honor and dignity," Hain said, "a country he knew – in his darkest hours in a bare basement cell – would never forget him."

The Mitchell Center is dedicated to documenting and determining long-term effects of war-time incarceration on U.S. military, civilian and contracted U.S. employees spanning nearly 40 years. It is the sole U.S. facility designed for this sort of evaluation, something Hain said pays dividends not only to the patients seen, but for current and future generations of

service members.

"A question that constantly is on our collective minds deals with the fact that so many of our people went through a truly terrible experience but emerged at the other end a better, stronger person," Hain said. "Answers to this question of why ultimately helps us contribute to the body of knowledge that prepares present day fighters to be deployed to a war zone."

The Mitchell Center is named for retired Capt. Robert E. Mitchell, a Medical Corps Officer whose final duty station was as commanding officer of The Naval Aerospace Medical Research Laboratory.

It was during this tour that he pioneered studies of repatriated Vietnam Prisoners of War and created the only surviving component of the original tri-service Center for POW Studies established in 1972. United States Air Force and Army programs were discontinued in 1978, and today the Mitchell Center consults and offers services to individuals from all branches of military service, including all 21 former POWs from the Gulf War and eight former POWs from Operation Iraqi Freedom.

The center provides unique services to former POWs and their families. This includes an Annual Extensive Evaluation that includes both physical and psychological evaluations, some-

# Supports Former POW

thing Hain says is designed to ensure individuals using the Mitchell Center's services receive the most appropriate care at a time in their lives when they may not pay sufficient attention to their aches and pains.

Hain also said that along with the benefits of the Mitchell Center's research in assisting the nearly 600 former POW's using the facility annually, the lessons learned from voluntary participation of former POWs has directly impacted the Survival, Evasion, Resistance and Escape courses taught to U.S. service members.

The Mitchell Center's research has also developed information used by the U.S. Department of Veterans Affairs for presumptive diagnoses, aided in research in understanding disease processes and a continued improvement to the repatriation process.

Future Mitchell Center undertakings include studies on bone density, premature aging, prostatic cancer and epidemiology in POWs, Hain said.

From research and patient care to attending luncheons in honor of former POWs, Hain said Mitchell Center staff consider it a privilege and honor to support these American heroes.

"What we do today – from the support and care the Mitchell Center provides to participating in functions



**Pictured is a drawing from a Mitchell Center patient. The center is the sole U.S. facility designed for this sort of evaluation, something Hain said pays dividends not only to the patients seen, but for current and future generations of service members.**

designed to honor these men and women who have endured so much – is an honor," he said. "I'm proud to have the opportunity to see and evaluate these individuals and participate in the program."

The Robert E. Mitchell Center for Prisoner of War

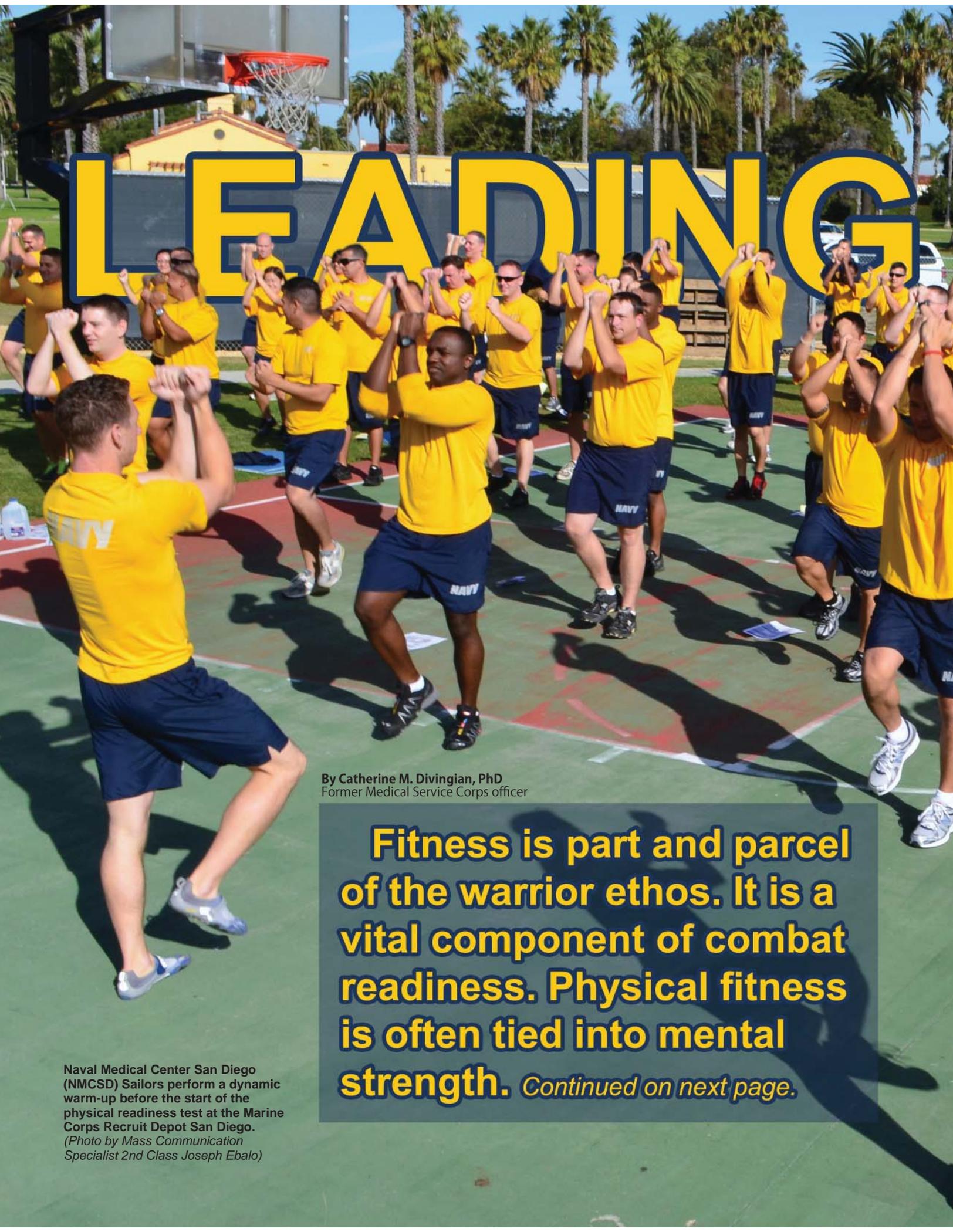
Studies is designated under the Naval Operational Medical Institute, which operates under the aegis of Navy Medicine Support Command, headquartered in Jacksonville, Fla.

NMSC provides a single point of accountability for all

support services within Navy Medicine and exercises command and control and financial management oversight over subordinate commands and ensures the economical and effective delivery of Navy Medicine enterprise-wide support services. 🌐

## **“A country he knew – in his darkest hours in a bare basement cell – would never forget him.”**

- Retired Navy Capt. Robert E. Hain,  
Robert E. Mitchell Center for Prisoner of War Studies  
executive director



# LEADING

By Catherine M. Divingian, PhD  
Former Medical Service Corps officer

**Fitness is part and parcel of the warrior ethos. It is a vital component of combat readiness. Physical fitness is often tied into mental strength.** *Continued on next page.*

Naval Medical Center San Diego (NMCS) Sailors perform a dynamic warm-up before the start of the physical readiness test at the Marine Corps Recruit Depot San Diego. (Photo by Mass Communication Specialist 2nd Class Joseph Eballo)

# FITNESS





**A Sailor assigned to Naval Medical Center San Diego (NMCS D) races to receive his numbered popsicle stick that tracks his finish time during the Physical Readiness Test at the Marine Corps Recruit Depot. (Photo by Mass Communication Specialist 2nd Class Joseph Ebal o)**

**B**attle requires enormous stamina and endurance, two components that are underpinned by mental toughness; and these are requirements for military personnel. They should be well entrenched among the ranks of active duty Navy members.

The Navy plans to enhance force readiness by increasing PFA standards and instating formally trained Command Fitness Leaders appointed by commanding officers (COs). They are required to undergo an intensive five-day course. Furthermore, these specialists are liaisons between their commands and BUMED, which maintains records of physical readiness.

Additionally, the Center for Personal and Professional Development (CPPD) is implementing the Navy Operational Fitness and Fueling Series (NOFFS). This ambitious program is in the process of being rolled out to most Sailors in the Fleet. Functional fitness, nutrition, and injury-prevention programs were meticulously developed to meet different operational needs.

However, the onus to oversee and implement command fitness falls directly on the COs. These leaders must provide opportunities to members of the command to meet requirements; designate PFA dates and ensure scores are entered within 30 days of testing; incentivize improvements in fitness levels; and establish and maintain programs at all times unless a medical waiver has been issued.

However, military leadership has often failed to uphold fitness as a top standard. Many COs do not provide time during extended work hours to provide opportunities for fitness activities. They may not be in shape, and

set a poor example of living a lifestyle conducive to wellness. Some do not take PFA testing seriously. As a result, active-duty members are lying and cheating on their physical readiness tests.

The CNO's message is clear: those who tolerate poor physical fitness standards do not support mission readiness. Furthermore, they are not upholding the Navy's standards of "Honor, Courage, and Commitment." CFLs are authorized and required to report violations, which lead to potential sanctions from the Uniform Code of Military Justice (UCMJ). Additionally, it now takes only two failures to lead to a member being dismissed from the military, even if he or she is only two years from retirement. All of this reflects poorly on leadership.

The Navy Leadership Competency Model (NLCM) defines five core competencies that are integral to managing fitness that each leader should be able to perform in his or her commands; and should be mastered by all who rise to a position of authority to influence health outcomes.

The first core competency in the NLCM is "Accomplishing Mission." The value of functional fitness, nutrition, and injury prevention cannot be understated in terms of combat readiness. Sailors are taught from the initial contact with the military that they are to be operational first, and to complete specific occupational tasks second. The needs of the Navy are to be borne by every contributing member.

The second is "Leading People." Leading from the front should hold true for COs, CFLs, and others in critical positions. The people that follow look for strong,

yet empathetic direction. They want a leader that holds clear values and a vision, is true to his or her word, and has the desire and ability to follow through. The followers readily detect authenticity. A senior officer or enlisted Sailor that is overweight, willing to cut corners or in any other way compromise integrity, lacks the quality of a standard bearer. It is imperative to lead from the front to gain the respect of the troops.

Third is “Leading Change.” It is vital for leadership to keep abreast of changes in policy regarding fitness as programs continue to develop. Again, the CFL and the NOFFS program provide valuable resources. Navy Knowledge Online (NKO) is also helpful. The challenge is working with Sailors that do not work well with change. New instructions are often bewildering. Mastering change management is imperative; and to help Sailors to successfully navigate through new directives.

Fourth is “Working with People.” This is where the leader as an influencer has its strongest value. Providing a true culture of fitness is essential. Implementing a vision of how this works is also up to the Navy leader.

“Resource Stewardship” is the final competency. Injury prevention and human peak performance ensure the best management of human resources, helping each Sailor contribute to the mission of the command and the needs of the Navy.

Wise leaders do not wait to implement command fitness programs. Body wraps, radical diets, and other extreme measures violate Navy directives. Avoiding the heartache of forced separation from the military begins with a culture that promotes fitness, nutrition, and injury prevention. Strong leadership that takes the value of force readiness to heart is required to ensure a healthy force. 🌐



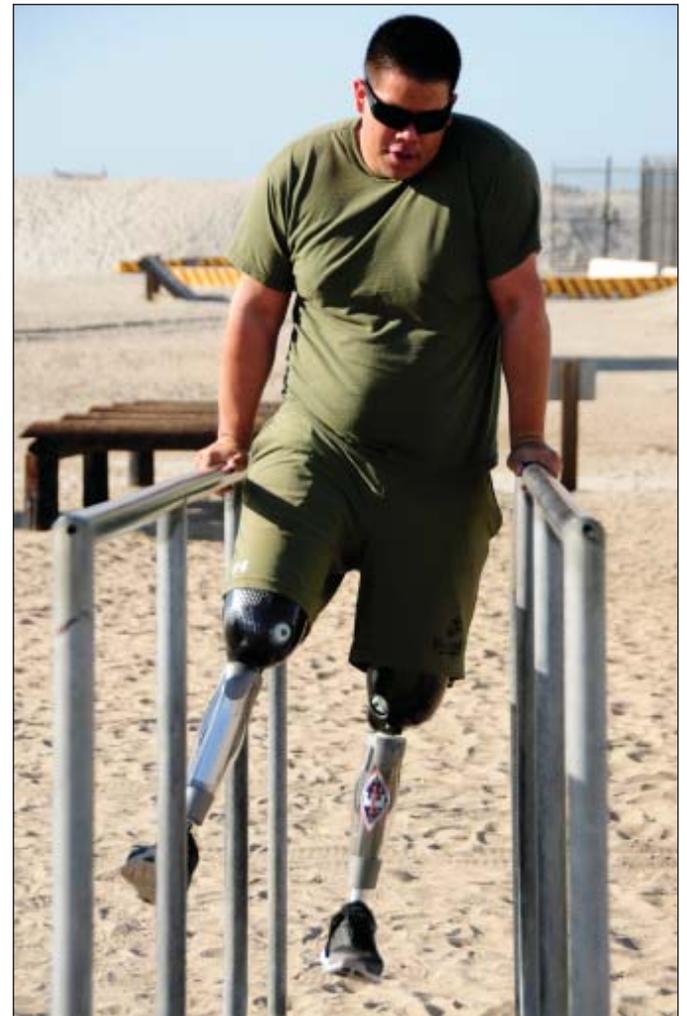
**Naval Medical Center San Diego (NMCS D) 1st Class Petty Officers lead more than 100 Sailors in stretches before the Sailor of the Quarter (SOQ) run. (Photo by Mass Communication Specialist 3rd Class Amanda L. Kilpatrick)**



**Hospital Corpsman 2nd Class Tiffany Salveson and Hospital Corpsman 2nd Class Christopher Williams demonstrate a proper curl up during the Physical Readiness Test at the Marine Corps Recruit Depot. (Photo by Mass Communication Specialist 2nd Class Joseph Ebaló)**

# OVERCOMING OBSTACLES





Wounded service members from Naval Medical Center San Diego participate in the obstacle course at the Naval Special Warfare Center (NSWCEN) on Naval Amphibious Base Coronado, Calif. In addition to the obstacle course evolution, the twelve wounded service members toured the Basic Underwater Demolition/Sea Air and Land (SEAL) training facilities during their visit. NSWCEN is working with Naval Medical Center San Diego to host wounded service members at NSWCEN to participate in various training activities. The Navy SEALs are the maritime component of U.S. Special Operations Forces and are trained to conduct a variety of operations from the Sea, Air and Land. (Photos by Mass Communication Specialist 2nd Class Kyle D. Gahlau)

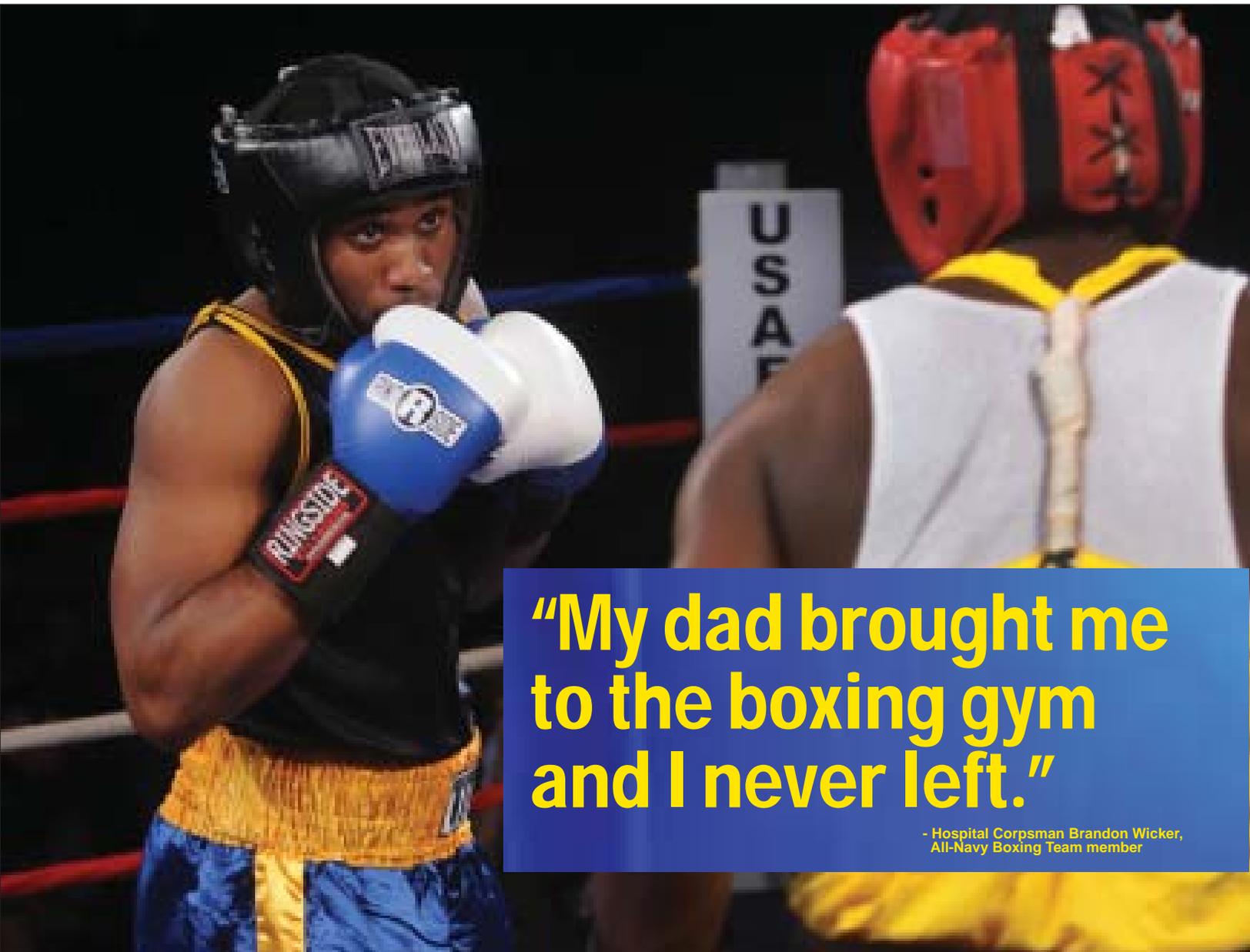
# FIGHTING FOR REDEMPTION

## Navy Corpsman Ready for Armed Forces Boxing Championship

By Paul R. Ross  
Managing Editor, Navy Medicine Magazine

**A** fighter makes his way between the ropes amid a cheering crowd. He receives some words from his coach as his boxing shoes meet the familiar canvas. He stares across to his opponent. Three rounds. Two warriors. One victory.

Hospital Corpsman Brandon Wicker takes the stage for his gold-medal bout in the 2011 Armed Forces Boxing Championship. Competitors from each branch of service fought in the finals Feb. 18, 2011 at Lackland Air Force Base. (Photo by Mass Communication Specialist 2nd Class Elliott Fabrizio)



**“My dad brought me to the boxing gym and I never left.”**

**- Hospital Corpsman Brandon Wicker,  
All-Navy Boxing Team member**

**Hospital Corpsman Brandon Wicker fights Army Spc. Jeffery Spencer for the gold medal in the final of the 178 lb. weight class of the 2011 Armed Forces Boxing Championship. Spencer defeated Wicker 12-3. (Photo by Mass Communication Specialist 2nd Class Elliott Fabrizio)**

This is where hard work, sacrifice and dedication pay off. This is where the hours of sweat and blood in the gym show. This is where redemption is found.

After a 12-3 loss in the championship round of the 2011 Armed Forces Boxing Championship, Hospital Corpsman Brandon Wicker will again represent the All-Navy boxing team in a quest for a gold medal and a team victory. The 5-foot-7, 178 pound fighter will travel to Camp Pendleton, Calif., in the end of January as one of ten All-Navy boxers participating in the yearly event.

“He was a good fighter, but I felt

like I could’ve done more to win,” said Wicker of his opponent in last year’s championship. “I don’t like to lose, but it comes with the sport. I took it with a grain of salt. But you know you have to work hard, come back, and win this time.”

This will be the third year representing the All-Navy team for the Taunton, Mass. native, who started boxing after originally trying to play football as a child.

“I started boxing at 12 after my father tried to sign me up for Pop Warner football,” said Wicker. “Unfortunately, the officials said that I would have to

lose at least 10 to 20 pounds first. So my dad brought me to the boxing gym and I never left.”

Wicker will take a slightly different approach to this year’s tournament than he did last year.

“I’ve got to be busier when I’m in that ring,” Wicker said. “Last year I was waiting too much for something to happen, waiting for that perfect punch. I can’t wait like that, that’s how I got beat.”

Throughout his 10-year boxing career, the Corpsman has recorded an impressive 43-14 record and won numerous awards, including a 2004



Hospital Corpsman Brandon Wicker upper cuts Army Spc. Jeffery Spencer in the 178 lb. weight class during the gold-medal bout in the final of the 178 lb. weight class of the 2011 Armed Forces Boxing Championship. Spencer defeated Wicker 12-2. (Photo by Mass Communication Specialist 2nd Class Elliott Fabrizio)

Jr. Olympic International Championship gold medal, a 2004 Jr. Olympic National Championship silver medal, a 2005 Jr. Olympic National Championship bronze medal and was the 2006 Ireland invitational champion.

“His boxing skills are excellent,” said Steve Carbajal, All-Navy Boxing Team coach, who has 32 years of boxing and coaching experience including six as the Navy coach. “He has an extensive background in international competition. He has done very well for us. And hopefully this year we can get a gold medal in his weight class.”

As a coach of military members, Carbajal looks for traits in addition to excellent skills inside the ring — traits that he says are apparent in Wicker.

“As a Sailor, he is excellent,” Carbajal said. “He was a team captain last year and will be a team captain this year. His leadership skills are really good. He’s very responsible, punctual and a great athlete to coach.”

Carbajal, who has coached various age groups throughout his career, finds it especially rewarding to teach military members like Wicker.

“To coach Navy fighters, and all military — Army and Marines — the attitude and work ethic has no comparison,” Carbajal said. “It’s an honor for me as a contract civilian to coach at that level.”

Wicker likens the sport to his military service in many ways.

“The biggest similarity is the core values of honor, courage and commit-

ment,” said Wicker. “These traits are needed to succeed in both professions.”

For Wicker, boxing is a passion and a large part of who he is.

“It’s something I love to do,” said Wicker. “I can’t explain it, it’s just a great sport with a lot of history and I want to be a part of that history one day. Now that I’m in the Navy, I’m boxing to keep what I’ve already accomplished and for what I’ve worked for all these years.”

The Corpsman would like to eventually turn his years spent in the ring into a career.

“I want to eventually be a professional fighter,” Wicker said. “It’s important to gain the experience now — learning and growing.”

The love he has for the “Sweet Sci-

ence” is similar to his love for the Navy and his career as a Hospital Corpsman, which he found after advice from his father.

“I love my job,” Wicker said. “When I joined the Navy and when I picked my job at MEPS the recruiter gave me two options. One was a culinary specialist and the other was a Hospital Corpsman. Before I picked my job all I could hear was my dad saying, ‘If you do anything don’t become a cook.’ That’s how I became a Corpsman.”

It was through his service in Navy Medicine that he eventually found his way to the All-Navy boxing team.

“I found out about the program in corps school from one of my instructors after a discussion about boxing and my experience in the sport,” Wicker said. “He gave me the paper work needed to do it and motivated me to do so.”

A common practice in sports is to compare an athlete to others in order to define their style. For Wicker, Carbajal says this is not necessarily an easy task.

“He’s got his own unique style,” Carbajal said. “He’s not that big for the weight class he’s in, because he’s a little short for 178 pounds. I don’t know who I’d compare him to. He’s good on the inside and a real slick fighter, kind of like Bernard Hopkins. He’s real aggressive and has good defensive skills. He’s kind of a combination of everybody. You can’t pinpoint a boxer he is similar to because he uses pieces from everybody.”

Wicker and the rest of the All-Navy Boxing team will represent the Navy at the Armed Forces championship, hosted by the Marine Corps at Camp Pendleton, Calif., Jan. 31 to Feb. 3.

“I want to go in there and just leave it all in the ring,” Wicker said. “As far as the fight is concerned, it’s in my hands. I want to win to make the Navy proud and to bring that gold medal home where it belongs.” 🇺🇸

**“I want to go in there and just leave it all in the ring.”**

- Hospital Corpsman Brandon Wicker,  
All-Navy Boxing Team member



**Culinary Specialist Seaman Julio Lopez, left, warms up with Hospital Corpsman Brandon Wicker before the start of his match during the All-Navy Box-Off at Naval base Ventura County. The All Navy Box-Off includes boxers from the Navy Boxing Team and other local boxing organizations.**

*(U.S. Navy photo by Mass Communication Specialist 1st Class Donald Walton/Released)*

# PREVENTING DISEASE

By Lt. Ryan Larson, NECE Public Affairs and Darnell Gardner, NAMRU-3 Public Affairs

Lt. Joseph DiClaro and Lt. Ryan Larson, medical entomologists from the Navy Entomology Center of Excellence (NECE), returned from the Republic of Liberia on Nov. 23 in support of a study investigating the risk of malaria to U.S. Servicemen supporting Operation Onward Liberty (OOL) and those deployed throughout West Africa.

Malaria risk is high in West Africa and has been problematic in recent history for Navy personnel deployed to Liberia.

In 2003, a Marine Expeditionary Unit consisting of 225 marines was deployed to Liberia. After the 10-day operation, 35% of the unit contracted malaria.

The effects of malaria, a pathogen transmitted by mosquitoes, can be deadly. In 2009 a Navy Seabee serving in Liberia died after contracting falciparum malaria.

During the four months following this death, several additional service members participating in OOL were also diagnosed with malaria.

In response to these events, Cmdr. Peter Obenauer, an entomologist with the Navy Medical Research Unit (NAMRU) No. 3, Cairo, Egypt, was part of a team requested by AFRICOM to investigate the malaria outbreak.

The life history and distribution of mosquitoes important to malaria transmission in Liberia is not well known. In August 2010, Cmdr. Obenauer was awarded a grant from the Department of Defense (DoD) Global Emerging Infections Surveillance and Response System (GEIS), a program designed to

strengthen the prevention, surveillance, and response to infectious diseases that threaten military personnel and their families.

"First of all, I realized that despite of the advanced knowledge of the malaria parasite and understanding of the vector, little work had been done in Liberia to elucidate the species involved in malaria transmission," said Obenauer of his initial trip to Liberia. "Secondly, I realized that U. S. service members are stationed in one of the highest malaria endemic areas of the world without any vector surveillance or control measures."

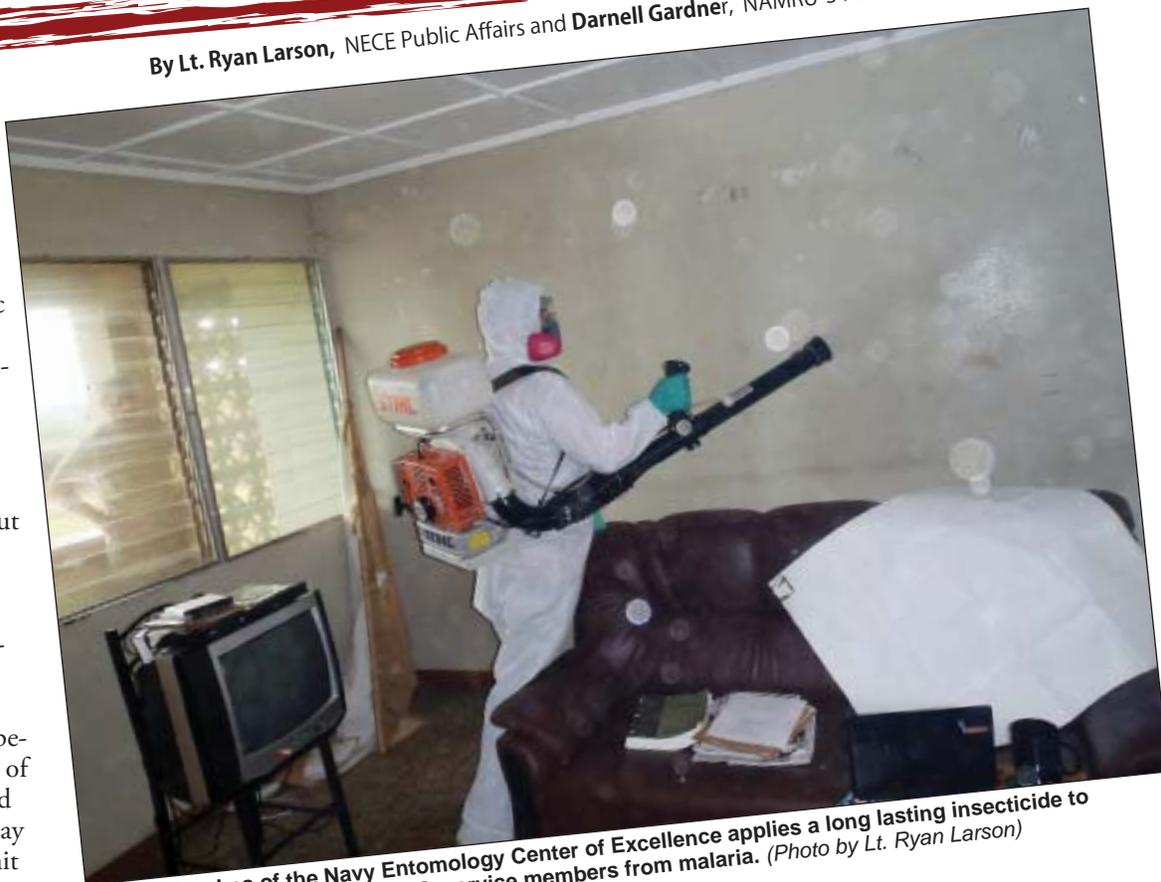
To bolster mosquito surveillance capabilities and deploy preventative measures to reduce malaria cases in members serving in Liberia in support of OOL, Cmdr. Obenauer developed a collaboration with NECE, an echelon 5 command under the Navy and Marine

Corps Public Health Center in Portsmouth, Va.

NECE is the DoD's center of expertise for insecticide application methods and equipment used to protect deployed troops from arthropod-borne disease.

"What better type of project brings vector control experts to one of the most malaria endemic regions of the world," said Obenauer. "This not only provides force health protection for OOL, but it also nurtures the development of NECE's junior officers and preventive medicine technicians (PMTs) by bringing them face-to-face with malaria."

Since March 2011 seven NECE personnel have supported five trips to Liberia to assist the NAMRU-3 led team. While in Liberia, NECE entomologists and PMTs have aided in mosquito collection and identification to increase the capacity of this study.



Lt. Tony Hughes of the Navy Entomology Center of Excellence applies a long lasting insecticide to barrack walls in order protect U.S. service members from malaria. (Photo by Lt. Ryan Larson)

These trips also contribute to Liberian health sector development.

“We are building laboratory capacity for the Liberian Institute of Biomedical Research (LIBR),” said Obenauer. “This collaboration with LIBR not only provides vector surveillance equipment, but we also train the local technicians on an array of topics including mosquito biology, surveillance, and control methods.”

“Our goal is that with this engagement, LIBR will provide sustained mosquito surveillance for the entire country. Bottom line, education is the key to controlling vector-borne diseases.”

Another part of this collaboration directly supports U.S. service members participating in OOL by providing preventive measures against malaria such as treating bednets and applying indoor residual insecticides to barracks.

Mosquito species that are most efficient at transmitting malaria tend to be closely associated with humans, often resting on the walls of homes and feeding inside. Therefore the long lasting insecticide applications take advantage of mosquito behaviour and provide months of protection.

NECE's efforts have also focused on prevention of leishmaniasis, which is a parasite transmitted by female sand flies.

Over 1,000 service members supporting Operation Enduring Freedom and Operation Iraqi Freedom were diagnosed with leishmaniasis between 2001 and 2006.

Dr. Todd Walker, Head of NECE's Testing and Evaluation Department, has been an integral part of a Deployed War-fighter Protection Program (DWFP) funded study in Kenya investigating methods to protect service members from sand flies.

DWFP is aimed at developing new technologies and techniques to protect service members from arthropod-borne diseases. NECE serves as the DoD lead agency responsible for facilitating and participating in collaborations associated with the DWFP

This study is a collaborative effort with the U.S. Department of Agricul-

ture, Agricultural Research Service, Center for Medical, Agricultural and Veterinary Entomology (CMAVE) and the U.S. Army Medical Research Unit-Kenya (USAMRU-K).

This team is currently evaluating materials that are commonly used in deployed environments for their ability to hold insecticide treatments and control insect vectors over long periods of time in dry environments.

“If camouflage netting is treated properly with residual insecticides, it could provide several months of protection against biting flies,” said Walker.

The projects in Liberia and Kenya are producing real-time results that can be used by our service members currently deployed to contingency operations.

“Collaborating with different organizations on a variety of OCONUS projects serves as a force multiplier bringing world-class expertise and resources to bear on critical vector-borne disease issues facing our deployed forces now and in the future,” said Cmdr. Eric Hoffman, NECE officer-in-charge. “This is our mission and we are committed to providing this level of support.”



**Lt. Joseph Diclaro (right) of the Navy Entomology Center of Excellence and Lincoln Gakpala (left) of the Liberia Institute for Biomedical Research sample a marsh for mosquito larvae.**  
*(Photo by Lt. Ryan Larson)*

# Training & Partnerships

By Tami Begasse  
Naval Hospital Jacksonville Public Affairs

Ensuring the Navy has the most talented medical professionals providing the best care available to our nation's heroes and their families now and in the future is something Naval Hospital (NH) Jacksonville takes very seriously.

"While our doctors and nurses care for service members and their families in much the same way as their civilian counterparts, military medical professionals must gain a broader spectrum of experience to ensure care is provided not just at shore-based hospitals, but also on forward-deployed aircraft carriers, at shock trauma units on battlefields and in response to global disasters," said NH Jacksonville commanding officer Capt. Lynn Welling, an emergency medicine physician. "Our training does not stop with the fundamental medical and nursing degrees and credentials. We offer advanced training programs to make certain our military medical professionals can provide the most sophisticated care available in any environment."

A key way NH Jacksonville achieves this is through its award-winning Family Medicine Residency Program, which was named clinical site of the year by the Uniformed Services University of

the Health Sciences (USUHS) in 2011. Not only is the hospital's program the Navy's largest accredited family medicine residency, it's also one of the nation's oldest (accredited in 1971). Each year, approximately 35 Navy physicians are exposed to cutting edge techniques and hands-on learning in a wide variety of sub-specialties (including prenatal care, geriatrics, primary care, preventive health and sports medicine) and active mentoring to cultivate clinicians capable of providing the full spectrum of care needed by military families.

"Our program is exciting, innovative and progressive, and it addresses the changing medical needs of the military family," said Cmdr. James Keck, who heads up NH Jacksonville's residency program. "Family medicine physicians treat and manage a broad range of health concerns, so it is critical we ensure we train our primary-care doctors to provide high-quality care for our military service members and their families—from birth through retirement."

Upon graduation, these skilled family medicine doctors support the medical needs of service members all over the world—at hospitals, on ships, on sub-

Hospitalman Edwin Torres instructs Jurgen Comberg, a college preparatory medical arts magnet high school student attending Naval Hospital Jacksonville's 2nd Science, Service, Medicine and Mentoring (S2M2) program, on how to prepare a demonstration patient, Hospitalman Adam Christopher, for an electrocardiogram. The S2M2 program is an intensive five-day course where students will get real-world experience in patient care areas from the operating and emergency rooms to pharmacy to physical and occupational therapy. (Photo by Mass Communication Specialist 2nd Class Gary Granger Jr.)





**Under the supervision of Naval Hospital Jacksonville Nurse Anesthetist Lt. Cmdr. Jeremy Kilday (left), Nurse Anesthesia Program Student Lt. Louis Grass (right) performs life support measures on a simulation mannequin (SimMan) being controlled by Nurse Anesthesia Program Site Director Cmdr. Brent Bushey. SimMan allows nurse anesthesia students to get additional exposure in the management of crisis situations during their 18-month clinical, didactic and research training at Naval Hospital Jacksonville as part of the Graduate School of Nursing at the Uniformed Services University of the Health Sciences. (Photo by Hospital Corpsman 1st Class Scott Morgan)**

marines and on battlefields. To enhance the educational experience, they also rotate at Shands at the University of Florida and Wolfson Children's Hospital, gaining experience in areas including trauma, emergency medicine, critical care and pediatrics. On top of that, the residency program supports over 40 additional medical students who rotate through the hospital's Family Medicine Clinic each year.

In addition to growing future doctors, NH Jacksonville also offers two nurse-training programs: Certified Registered Nurse Anesthetist Program and Perioperative Nurse Course. About 40 Navy nurses participate in the hospital's three-month perioperative course which is designed to provide Navy nurses with

the specialized knowledge and skills needed to provide the comprehensive care needed for patients before, during and immediately after surgery. The Graduate School of Nursing at USUHS offers a 30-month master's-level Nurse Anesthesia Program which begins with a year of classroom training at USUHS followed by 18 months of clinical, didactic, and research training at a clinical site. Three to four nurse anesthesia students are assigned each year to NH Jacksonville's site.

Cmdr. Brent Bushey, who is the NH Jacksonville site director for the anesthetist program which will become a doctorate-level program in 2013, explained that along with the instruction at NH Jacksonville, students get real-life

experience with high-acuity patients at facilities including Shands, Flagler Hospital, and Kosair Children's Hospital (ranked among the top children's hospitals nationwide).

"Our goal is to prepare nurse anesthetists to function in more medically complex and acute settings around the world. This is especially important, as most of our certified registered nurses deploy to support the fleet after their first year, which can mean being the sole anesthesia provider for an aircraft carrier that may have 5,000 personnel onboard," says Bushey.

Another way NH Jacksonville prepares Navy nurses is through high-fidelity simulation and skills labs. Using mannequins to simulate patient



**Lt. Steve Weatherspoon, a third year resident and doctor of osteopathy, assesses a patient in Naval Hospital Jacksonville's Family Medicine Clinic. Each year, approximately 35 Navy physicians are exposed to cutting edge techniques and hands-on learning in a wide variety of sub-specialties (including prenatal care, geriatrics, primary care, preventive health and sports medicine). (Photo by Hospital Corpsman 1st Class Scott Morgan)**

problems such as complications during surgery and the birth of a child, the hospital staff is able to better educate nurses in acute care situations through realistic role-playing, simulations and thorough de-briefs. Skills labs include training using mock scenarios to help nurses use problem-solving abilities to treat patients.

Collaborating with Shands (since 1998) and Orange Park Medical Center (since 2011)—12 to 18 nurses participate in two-week rotations to gain hands-on experience with emergency, trauma and critical care patients. For these nurses, it means being part of that hospital's staff for the two-week period, working with the most acute patients in areas such as neonatal intensive care, trauma and cardiovascular units, and labor and delivery.

Lt. Cmdr. Cindy Beltejar, a nurse who heads up NH Jacksonville's Maternal Infant Unit, participated in two rotations at Shands in 2010. One month after completing her second two-week trauma rotation, she deployed to a trauma unit at Forward Operating Base Lagman in Afghanistan in January 2011. Since NH Jacksonville is not a level-one trauma hospital, the training experiences available at Shands and other facilities better prepare her and other staff to deliver front-line medical care. "We

received approximately 500 trauma-level patients alone during my deployment there—80 in just one month," Beltejar said. "While the cases presented at U.S. based hospitals are different than those resulting from war, the treatment of trauma patients is the same. And the trauma experience I gained at Shands was invaluable and better prepared me to care for some of the most critically wounded casualties of war of all ages while I was deployed to Afghanistan."

Along with the two-week clinical rotations Beltejar and other staff are fortunate to participate in, NH Jacksonville collaborates with the local medical reserve unit (Operational Health Support Unit Jacksonville), Orange Park Medical Center, Shands and Baptist Health on a two-day Trauma Nursing Core

Course (TNCC). By pooling resources, the course is offered to nurses from the Navy and community hospitals four times a year – allowing 24 nurses from each facility to participate each year. The TNCC is aimed at nurses with limited access to trauma patients to better prepare them to be essential members of the trauma team.

All-in-all, almost 150 military and civilian students receive training throughout NH Jacksonville every year. More than 100 training agreements with local and national universities, colleges and medical organizations make these learning opportunities possible—from physical therapy students from the University of North Florida to family medicine residents from the Mayo Clinic.

And NH Jacksonville's role in growing our nation's healers doesn't stop with graduate-level education. A handful of students from Darnell Cookman Middle/High School participate in the hospital's intensive five-day Science, Service, Medicine & Mentoring (S2M2) Program each year. These students get real-world experience in patient care areas including the emergency and operating rooms, pharmacy, and physical and occupation therapy.

Jurgen Comberg, a Darnell-Cookman senior, participated in NH Jacksonville's S2M2 program for two-years. "My goal for the future is to become a trauma neurosurgeon in the Navy, so coming here has been very helpful."

Whether better preparing the Navy's current doctors and nurses or growing the next generation of health care professionals, NH Jacksonville is doing everything it can to make Navy medicine, DoD medicine and U.S. medicine the best it can be. 🌐

**“Our program is exciting, innovative and progressive, and it addresses the changing medical needs of the military family.”**

- Cmdr. James Keck, head of the Naval Hospital Jacksonville residency program

# Medical Support to the **MARINE CORPS**



**N**avy Medicine personnel provided medical care for the 2011 Marine Corps Marathon (MCM) Oct. 28. Volunteers, mostly from Naval Health Clinic Quantico, Va., were in place to take care of all the runners race weekend; 3,000 kids in the Fun Run, 10,000 10k runners and 23,000 marathoners.

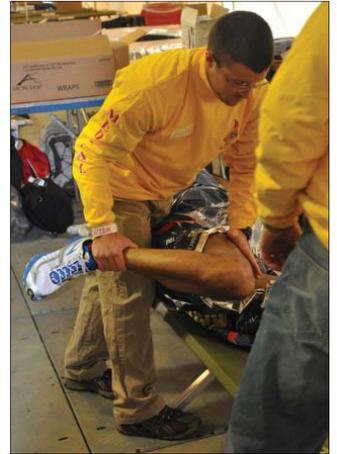
“They load buses before dawn in unpredictable weather and travel to the district or Virginia to cheer and care for runners from all over the world,” said Capt. Michele Weinstein, U.S. Navy Bureau of Medicine and Surgery assistant chief of staff and medical operations officer for the MCM. “Wearing their bright gold medical shirts they are a beacon for runners suffering from medical ailments. They are the sign that the finish line is near as they keep a runner from collapsing or warm one who is chilled to the bone. They help find lost children, cheer with the spouse of a wounded warrior completing the event after months of being in a hospital. They do what Navy Medicine does every day for our warriors and families; provide competent and comforting care.

Annually, Navy Medicine personnel treat everything from blisters and soreness to heat stroke and fractures in their aid stations located strategically throughout the course at the “People’s Marathon.” They have become an essential piece of the events success.

“I’ll tell you today, I’ll tell you tomorrow, I’ll tell you a year from now, I couldn’t be any prouder of this staff,” said Capt. Mary Beth Neill, commanding officer, Naval Health Clinic Quantico, Va., which provides nearly 270 personnel for the race. “This staff continues to amaze me with their energy, their dedication and their can-do attitude.”



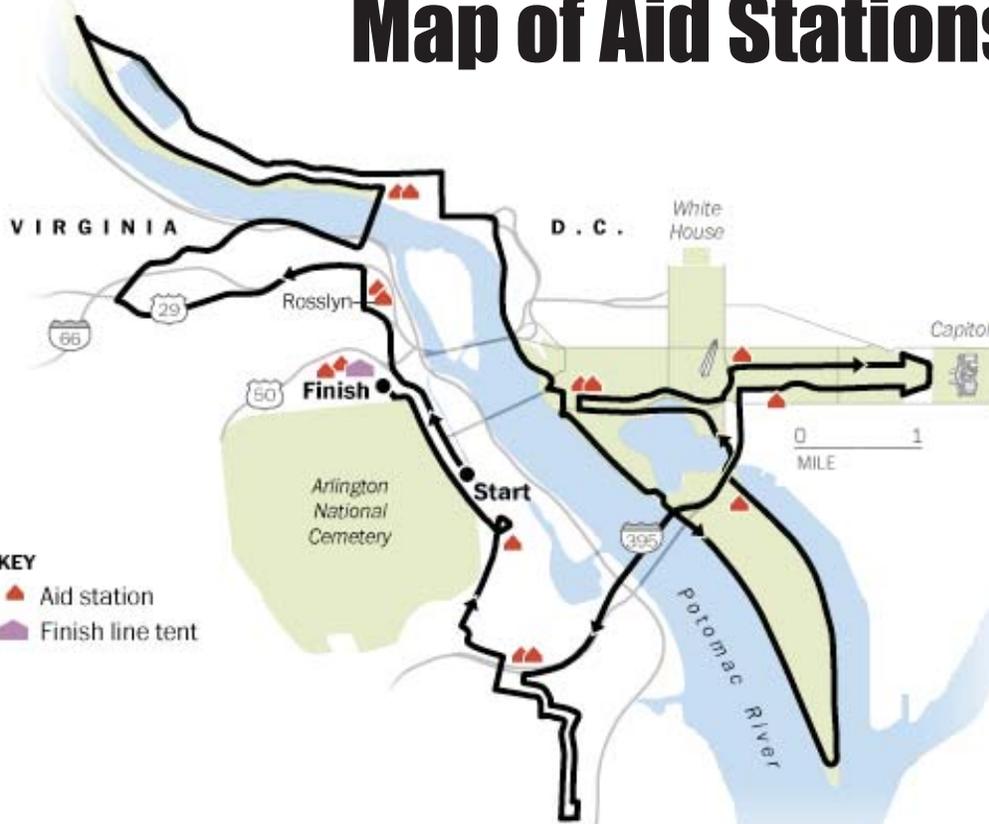
# MARATHON



Above - A volunteer stretches out the hamstring of a runner after the Marine Corps Marathon. (Photo by Paul R. Ross)

Left - Chief Hospital Corpsman Scott Rudy, Naval Health Clinic Quantico, Va., (center, crouching) with the assistance of additional Navy corpsmen, places a runner on a stretcher for transport to a medical tent at the Marine Corps Marathon. (Photo by Paul R. Ross)

## Map of Aid Stations



Ten aid station tents dotted the course, and five others were dispersed around the finish area and post-race festival. One of those was at the Rosslyn Metro station, where exhausted runners have keeled over on the platforms. (Graphic Bonnie Berkowitz, Laura Stanton and Kat Downs —The Washington Post. Published Oct. 24, 2011)

Far left - Capt. William Adams, lead medical officer for the Marine Corps Marathon speaks with staff members and volunteers in Tent Alpha prior to the start of the 26.2 mile race. (Photo by Paul R. Ross)



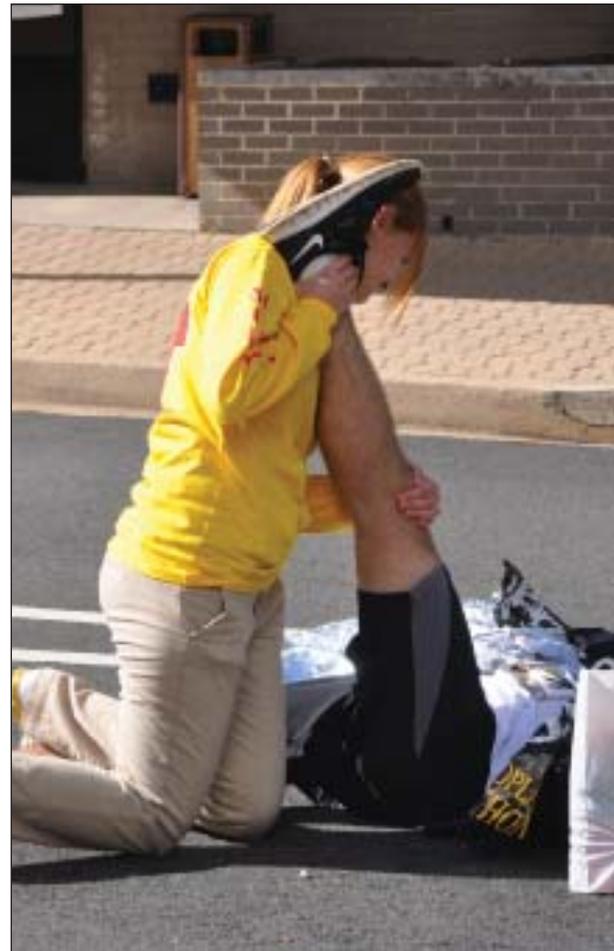


A Navy corpsman assists a runner shortly after crossing the finish line of the Marine Corps Marathon. (Photo by Paul R. Ross)



Navy corpmen man the check-in station at an aid tent during the 26.2-mile race. (Photo by Heidi Linscott, Naval Health Clinic Quantico, Va. Public Affairs)





**Above - A volunteer assists a runner who was having cramps after completing the race. (Photo by Paul R. Ross)**

**Left - A Navy Medicine volunteer team assists a runner in an aid station. (Photo by Paul R. Ross)**



**Above - A volunteer discusses a runner's symptoms in an aid station. (Photo by Paul R. Ross)**

**Left - A volunteer works with paramedics to transport an athlete to a local hospital. Runner's with symptoms that were too severe to treat at the aid stations were transported by ambulance to local medical centers. (Photo by Paul R. Ross)**

# Corpsman Carries Unique Distinction

**Story and photo by Julius L. Evans**  
Navy Medicine Logistics Command  
Public Affairs Officer

Navy hospital corpsmen have long played unique roles in providing high quality health care for uniformed service members and retirees at Military Treatment Facilities (MTF) around the world. They are engaged in all aspects of expeditionary medical operations in support of Warfighters and ensure Sailors, Marines and other users of the Military Health Systems are medically prepared to meet their worldwide missions. A significant part of that readiness depends on top-quality medical equipment that is operable and ready-to-go at any moment.

According to the U.S. Navy Bureau of Medicine and Surgery's Equipment Management Manual, Naval Medical Logistics Command, Fort Detrick, Md. has oversight of all biomedical equipment maintenance programs in the United States Navy. The Biomedical Equipment Maintenance Division at each Navy MTF ensures all medical equipment works and meets appropriate established standards.

Biomedical equipment technician and clinical engineering roots can be traced back to the early 1970s. Noted consumer advocate Ralph Nader published an article that brought the medical industry to a state of frenzy, reportedly claiming that 1,200 people annually died from electrocution in hospitals from malfunctioning medical equipment. Seeking to provide maintenance and electrical safety testing of medical devices, a new discipline was essentially created to manage tasks such as changing defective electronic or mechanical parts or calibrating medical devices to assure they functioned properly.

Today's medical technology is far more advanced than 41 years ago. Vac-

uum tubes have been replaced with solid state devices and integrated circuits; logic circuits have been replaced with computer programs and applications. The functional safety requirements remain the same, but risk assessment is now a more prevalent maintenance management strategy to discover the equipment's inherent probable or hidden failures.

Navy Biomedical Equipment Technicians (BMETs) are not only expected to do bench work on medical devices but are also expected to manage the medical equipment throughout its lifecycle. They understand both the clinical applications and the electromechanical functions of medical devices. Moreover, they understand that the functional safety of medical technologies is based on three fundamental characteristics inherent in all medical devices -- accuracy, precision and reliability.

Comparably, an individual at Naval Medical Logistics Command inherently displays the characteristics described above and has a couple of more accolades to her credit.

Hospital Corpsman Chief (SW/AW) Casey R. Payne is Naval Medical Logistics Command's Senior BMET Representative to the Navy MTFs. She provides Navy-wide guidance for the effective implementation of policies and procedures governing medical equipment and maintenance for 33 Navy MTFs, four Naval Medical Research Commands and the Navy and Marine Corps Public Health Center. Additionally, she works in conjunction with the BMET (NEC 8410) Enlisted Technical Leader, the BMET Representatives at Navy Medicine East, Navy Medicine West, and other operational entities ensuring the free flow of communication to all BMETs. She is essentially the hub for critical information that impacts all BMETs.

Payne also carries one other unique distinction. Although the United States Navy has about 340,000 active and 128,000 reserve members on its rolls, she is currently the Navy's only female chief who actively carries the NEC 8410. In fact, of the 303 Navy BMETs, only 18 are female.

However, she does not belabor this distinction. "BMET, as a classification, is a multifaceted career field that encompasses multiple occupations within the Navy. First and foremost we are Sailors, then Corpsmen and finally Biomedical Equipment Technicians," she explained. "As far as our technical compatibility to other Navy Enlisted Classifications, we have the aptitude for electronics, electricity, plumbing, information technology, logistics, and basic-to-advanced radiology."

Considering the multitude of equipment and medical devices that fall within the range of disciplines listed above, clearly, qualified technicians are needed to manage the functional safety of medical technologies. The requirement for maintenance and equipment safety assures correct equipment voltage regulation, correct calibration and all other aspects associated with properly maintaining operable life saving equipment.

Defibrillators, for instance, provide specific charges to ensure a heart receives the precise voltage in emergency situations. Improperly maintained, they could be rendered useless and in a worst case scenario may result in death or injury to a patient. Likewise, an improperly calibrated electrical surgical unit, the equipment doctors use to cut flesh, has the potential to cause severe patient burns or a fire in an operating room. Another example is something as common as a radiographic system. One exceeding the recommended amounts of radiation could expose a patient to an



**Aboard the USNS Comfort, Chief Casey R. Payne discusses with Hospital Corpsman 1st Class Jon Strong, Hospital Corpsman 1st Class Keith Skelley and Hospital Corpsman 1st Class (SW/AW) Rex Valencia the radiation calibration testing procedures being implemented by the Department of Defense.**

unnecessary dose of harmful radiation.

“BMETs are the little known but integral part of the hospital corpsmen field. We are proficient and maintain our role as Corpsmen but maintain all medical equipment vital to the functionality of life,” Payne explained. “Our impact to the Warfighter and the enterprise is the continuous preventative maintenance of medical equipment to support life saving efforts for Sailors, Soldiers, Airman and Marines.”

Somewhat mimicking that old common recruiting slogan, Payne explained that the BMET field is ‘looking for a few good men’ and women. “We are critically undermanned and in light

of the Navy manpower changes currently involving many ratings, I want to encourage my fellow shipmates to take a look at the biomedical equipment technician enlisted classification,” she said. “To become a BMET, a candidate must graduate from Hospital Corps “A” School and be accepted into the Biomedical Equipment Technician “C” School.”

In addition, Payne explained why considering changing to the BMET field could be beneficial. “Our specialty establishes professionals for follow-on careers in a variety of fields, including medicine, electronics, information technology, logistics and radiology to name

a few,” she said. “While maintaining the highest medical equipment maintenance technologies for military service members while on active duty, they could be well positioning themselves for meaningful careers after leaving the service.”

Maintaining high-tech medical equipment will remain the primary job of BMETs because high quality health care for uniformed service members and retirees has always been a priority of the military services. Chief Payne exemplifies the commitment, dedication and professional technical expertise of the hospital corpsman and BMETs charged with maintaining high quality care in MTFs around the globe. 🌐

# AMERICAN CITIZEN

By Mass Communications Specialist 1st Class Bruce Cummins  
Navy Medicine Support Command Public Affairs



## Realising the American Dream Through Service to One's Country

Hospital Corpsman 1st Class (SW/FMF) Oswaldo Hernandez, who was born in Mexico City and came to America illegally as an eight year-old boy, was named the U.S. Navy Bureau of Medicine and Surgery Sailor of the Year, Dec. 9, 2011. (Photo courtesy of Hospital Corpsman 1st Class (SW/FMF) Oswaldo Hernandez)

**T**he sun was setting, thin ribbons of color became visible through the window of the conversion van. An 8-year-old Mexican boy sat in the packed vehicle with his aunt, uncle and six other children, looking out at the long line of cars at a checkpoint that would become U.S. 5 and San Diego in a few short miles.

As the van inched closer, he practiced the only English words he knew, a phrase his aunt and uncle taught him — “American citizen.”

The border agent shined a flashlight onto the child and asked him a question in English.

“American citizen,” the 8-year-old replied, producing a smile from the bi-lingual agent.

Again, the agent asked him a question, words

the boy could not understand. But, he felt an obligation to reply.

“American citizen.”

The agent laughed and spoke to the boy again, his tone bemused yet kind, and the boy, a child born in Mexico City, replied yet again with the only English phrase he knew.

“American citizen.”

The agent spoke to the boy's aunt, words he would never know until years later when he asked the aunt and uncle.

“Give him an opportunity,” the border agent said. “Tell him to make a life for himself. In some way, make him pay up,” the aunt told the boy, now a father.

Nearly three decades later, that boy is what he professed to the border patrol agent during the

trip he said changed his life forever. Thirty-five-year-old Hospital Corpsman 1st Class (SW/FMF) Oswaldo Hernandez, now a senior instructor supervisor at the Medical Education and Training Campus (METC) at Fort Sam Houston, is an American citizen, and out of the nearly 40,000 corpsmen in the United States Navy, this immigrant from Mexico who initially entered the United States illegally is the Bureau of Medicine and Surgery's (BUMED) 2011 Sailor of the Year.

Selected from a field of other candidate's from BUMED's four regional commands - Navy Medicine Support Command (NMSC), Navy Medicine East, Navy Medicine West and Navy Medicine National Capitol Area, Hernandez was selected as the BUMED Sailor of the Year based on what NMSC Command Master Chief (SW/FMF) Rusty Perry said he and other selection board members found a simple, incontrovertible fact.

"Sailors like Hernandez are the future of the organization we have all chosen to serve," Perry said. "This Sailor is the epitome of what the Chief's Mess expects from our first class petty officers, and to come from the humble beginnings that Petty Officer Hernandez did speaks volumes of his character, his determination to succeed and his dedication to the Navy and the country he proudly serves."

Hernandez, however, downplays his selection as the BUMED top Sailor, citing the thousands of Corpsmen and medical professionals comprising the BUMED global enterprise as all key players in the constantly shifting role Navy Medicine

plays in operations around the world.

"It is an indescribable feeling to be chosen as NMSC Sailor of the Year from among the best Sailors that Navy Medicine has to offer," said Hernandez. "This selection is a culmination of both my senior leadership's guidance and mentorship, and my junior Sailors and students having confidence and trust in my abilities to lead and mentor."

Hernandez will represent BUMED at the Vice Chief of Naval Operations (VCNO) level of the Sailor of the Year selection process in a few months, hopefully moving on to the CNO Sailor of the Year selection. The final winner at the CNO-level will be meritoriously promoted to Chief Petty Officer.

A far cry from what Hernandez described as humble beginnings.

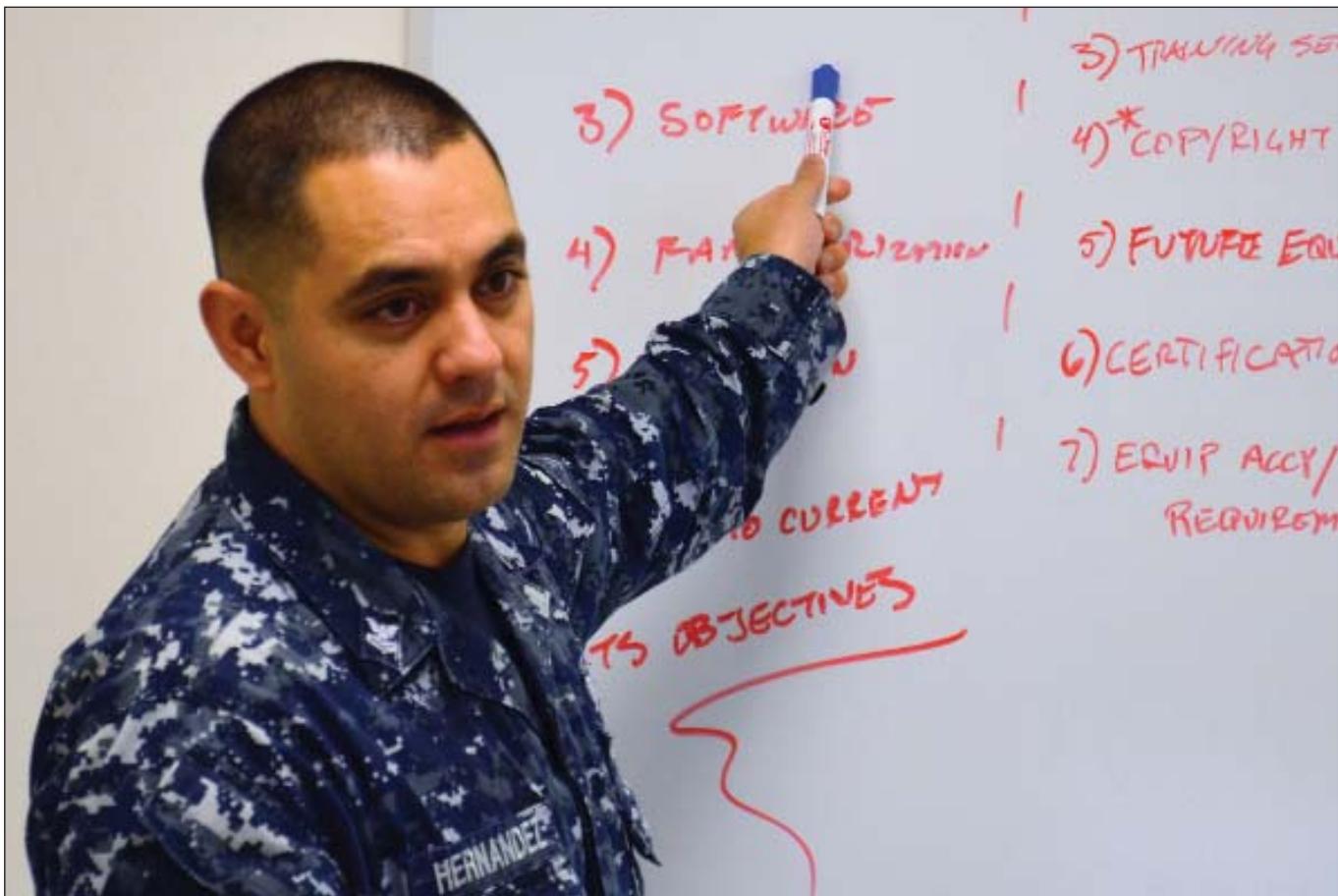
Born in Mexico City, Hernandez briefly relocated to Los Angeles as a small child, spending three years in Los Angeles before returning to Mexico City. After the birth of his younger brother, Hernandez's family moved to Colima, about two hours south of Guadalajara, something he described as a difficult time for the family.

"There were times -- and I know my mother doesn't want me to remember these things -- where there were just beans and rice for breakfast and lunch. There was no dinner," he said. "There were times where I remember we had to go get buckets of water from the local gas station because we didn't have any water in the small house we lived in."

Hernandez began to think of ways he could

**“There were times — and I know my mother doesn’t want me to remember these things — where there were just beans and rice for breakfast and lunch. There was no dinner.”**

- Hospital Corpsman 1st Class Oswaldo Hernandez, senior instructor supervisor at the Medical Education and Training Campus at Fort Sam Houston, Texas



Thirty-five-year-old Hospital Corpsman 1st Class (SW/FMF) Oswaldo Hernandez is a senior instructor supervisor at the Medical Education and Training Campus (METC) at Fort Sam Houston, Texas. As a METC instructor, Hernandez spends his days focused on helping young Sailors become the best corpsmen possible. (Photo by Lisa Braun, Medical Education and Training Campus Public Affairs)

help, eventually arriving at a decision that would separate the close family but something he saw as inevitable. At the invitation of an uncle in Los Angeles, then 8-year-old Hernandez made the decision to leave his family in the hopes of eventually helping them.

"It's not that I didn't like living in Mexico," he said. "I didn't like seeing my mother struggle. It was either feed me, or feed my brother," he said. "My mother told me that I was my own man and that I could make my own decisions, and if this is what I wanted, if this is what I thought was best, then I should go. I packed a few things and got on the road with my uncle."

Hernandez crossed the border in February 1986, determined to make something of himself and help his mother and brother.

"That's always been a goal," he described, "to just help my family."

Hernandez lived with an aunt and uncle who owned a nightclub/restaurant in Redondo Beach,

Calif., where he lived and worked, bussing tables and washing dishes at an early age. He later worked in front of the restaurant, accepting cover charges and finally tending bar, his aunt teaching him to mix drinks.

Though he entered the U.S. illegally as a child, Hernandez said his aunt and uncle helped him gain legal temporary residency then permanent residency.

After graduating from Redondo Union High School in Redondo Beach, Calif., in 1995, Hernandez continued working to save money for college. He then moved to San Diego after being accepted to San Diego State University. The money he had saved was gone after one semester.

"I was living day to day, paycheck to paycheck," he said. "It was either feeding the car with gas or feeding myself. I worked at Le Meridien at the gift shop, and I used to want to work the weekends because they had the weekend brunch. All the food that was unused was taken to the

staff, and they would put it out. I always used to pack a couple of bags so I would have food for a few days.”

Hernandez had long thought of joining the military and ultimately joined the Navy. Since joining 14 years ago, Hernandez, a biomedical repair tech, has served across the globe including tours at Naval Hospital Jacksonville, Fla., where he deployed for nine months to Djibouti; and on board USS Emory S. Land, forward deployed to La Maddalena, Sardinia, Italy.

As a METC instructor, Hernandez now spends his days focused on helping young Sailors become the best corpsmen possible. Perhaps this is one way he follows through with the border agent’s challenge 26 years ago to make a life for himself and somehow pay up.

“What that border agent did for me, I’m grate-

**“I am so thankful, and if I ever had the opportunity to ever thank that man, I would thank him for everything.”**

- Hospital Corpsman 1st Class Oswaldo Hernandez

ful,” Hernandez said. “I am so thankful, and if I ever had the opportunity to ever thank that man, I would thank him for everything.” 🌐



From left to right: Hospital Corpsman 1st Class Sean LaBarbera, U.S. Navy Bureau of Medicine and Surgery; Hospital Corpsman 1st Class Subrina Strauss, National Capital Area; Hospital Corpsman 1st Class Oswaldo Hernandez (Navy Medicine Sailor of the Year 2011), Navy Medicine Support Command; Hospital Corpsman 1st Class Scott Moore, Navy Medicine West; and Hospital Corpsman 1st Class Phillip Jean-Gilles, Navy Medicine East, hold the ‘Care Under Fire’ trophy at the Navy Medicine Sailor of the Year ceremony, BUMED, Washington, D.C. Dec. 9, 2011. (Photo by Gary Corpuz)

# NAMRU-Dayton Studies Jet Fuel and Noise-induced Hearing Loss

By Lt. Pedro A. Ortiz  
NAMRU-Dayton

Hearing loss is one of the most prevalent service-connected disabilities for veterans of the armed forces, with noise-induced hearing loss being a major military operational health hazard. Although widespread hearing conservation measures have been adopted, noise-induced hearing loss is as high as 20 to 30 percent in the military.

Noise exposure standards have historically been based on the range of human auditory sensitivity and exposure duration; however, recent research has established that simultaneous and even successive exposure to noise and specific

chemical agents, including those found in jet fuel, can potentiate noise-induced hearing loss or produce additive effects.

In a project funded by the Air Force Surgeon General, researchers from The Naval Medical Research Unit – Dayton (NAMRU-Dayton) at Wright Patterson Air Force Base, Ohio, the Air Force 711 Human Performance Wing/RHPBA and the Memorial VA Medical Center collaborated to determine whether there is an association between jet fuel exposure and noise-induced hearing loss. The studies exposed rats to non-damaging “white” noise and jet fuel, both separately and in combination. While neither noise nor jet fuel alone had a significant effect on auditory function, significant

dose-related impairment of auditory function was observed in rats co-exposed to noise and a high dose of jet fuel.

Although the studies were performed with Jet Propulsion (JP)-8, they will likely need to be expanded to JP-5, as well as the new battery of alternative jet fuels awaiting approval for military use.

Collectively, these results will allow a more accurate evaluation of exposure standards for the co-exposure of jet fuel and noise. This in turn will lead to significant savings due to decreased health care costs and the retention of specialized personnel, as well as savings due to reductions in long term health care and support for those leaving military service. 🌐



Shooters launch an F/A-18F Super Hornet from a catapult during flight operations aboard the aircraft carrier USS Theodore Roosevelt (CVN 71). Theodore Roosevelt and her embarked airwing are conducting a Composite Training Unit Exercise. (Photo by Mass Communication Specialist Seaman John Suits)



**Hospital Corpsman 1st Class Williams, NEPMU-6, sprays a landfill with insecticide to control the mosquitoes that transmit dengue fever. Old tires and trash that holds water make a perfect habitat for the mosquitoes to breed. (Photo courtesy of NAMRU-2 Pacific Public Affairs)**

# NAMRU-2 Responds to Marshall Islands Dengue Fever Outbreak

**By Lt. Dustin J. Harrison**  
NAMRU-2 Pacific Public Affairs

The U.S. Naval Medical Research Unit No. 2 (NAMRU-2) Pacific sent a five-man vector control team to the island of Majuro, Republic of the Marshall Islands (RMI) Nov. 4 to assist the RMI Ministry of Health (MoH), the Centers for Disease Control and Prevention (CDC), and the World Health Organization (WHO) in stemming the tide of the worst dengue fever outbreak to hit the Pacific island nation in more than 15 years.

The vector control team, led by NAMRU-2 Pacific entomologist Lt. Ian Sutherland, included one preventive medicine technician (PMT) from NAMRU-2 Pacific augmented by three PMTs from the Navy Environmental and Preventive Medicine Unit No. 6 (NEPMU-6), Pearl Harbor, Hawaii; three personnel from the U.S. Army Public Health Command Region Pa-

cific, Camp Zama, Japan; and six local Marshallese volunteers. The team deployed at the request of the government of the RMI in response to a massive outbreak of dengue fever that began at the end of October.

The team has been busy educating the local population, emphasizing the MoHs community cleanup campaign to reduce the sources where the mosquitoes that transmit the disease breed. The team has also been hard at work applying pesticides to control both adult and larval mosquitoes.

“We have been working with CDC, WHO, and MoH to get educational brochures out to people’s houses,” said Sutherland. “We’ve spent some time training local volunteers to identify and spray for mosquitoes, and they are doing an excellent job. They are motivated partners.”

Radio New Zealand International, Wellington, New Zealand, first reported on the dengue outbreak Oct. 21, when

RMI Health Secretary Justina Langidrik said three people had been diagnosed with dengue fever; all three patients were hospitalized. To date no deaths have been reported from this outbreak. Other islands (Ebeye, Utirik, and Arno) in the RMI have also reported cases of dengue fever, but most cases have occurred on the Majuro Atoll, the country’s largest population center. The CDC Dengue Branch, located in San Juan, Puerto Rico, has performed the confirmatory testing and has attributed this outbreak to infection with the dengue-4 viruses.

“CDC is privileged to have the opportunity to work with NAMRU-2 and WHO in helping the people of the Republic of the Marshall Islands to stop this epidemic,” said Cmdr. Tai Ho Chen, U.S. Public Health Service, Quarantine Medical Officer, CDC Division of Global Migration and Quarantine, who has helped coordinate the multinational and cross-organizational disease response effort. 🌐

# NSMRL Joins in Annual Science Day

**From Naval Submarine Medical Research Laboratory Public Affairs**

The Naval Submarine Medical Research Laboratory (NSMRL) participated in the second annual 4H Science Day at the Submarine Force Library and Museum, Groton, Conn., Oct. 19. NSMRL joined the Coast Guard and a dozen other participants, along with Operation Military Kids and McGruff the Crime Dog, to engage children in experiments and show them how much fun learning can be.

“Our future is dependent on these young minds. It is important for us to play an active role in exciting students about careers in science and technology,” said NSMRL commanding officer, Capt. Paul C. Kelleher, who was enthusiastic about this year’s expanded displays. “The 4H Science Day is a unique opportunity to reach students at a critical age. And it is fun.”

As part of the hands-on NSMRL display, Master Diver Rick Donlon; Chief Navy Diver Jack McPherson; Navy Diver 2nd Class Dillan Miller, and Navy Diver 3rd Class Christopher Johnston set up a complete wet suit and a hot water suit, a USN Mk-21 deep-sea helmet, a Mk-20 full face mask and an EXO BR-26 saturation diving mask. A complete scuba tank and regulator were set up for the children to experience HeO<sub>2</sub>, the helium and oxygen mixture used by divers for deeper dives.

“This is the second time we have participated in the science fair; I’m amazed at the interest level of the children,” said Donlon. “They not only enjoy seeing and touching the dive gear, but also have very technical questions. Each group has one or two young future Navy divers and when asked who knows what the acronym S.C.U.B.A. stands for? eyes light up and the report is loud and clear! They then receive their congratulatory, ‘hoo-yah.’”

The NSMRL team also set up a hearing conservation display. Geared towards the fair’s school-age attendees,



**Navy Diver 2nd Class Dillan Miller (left) shows a child how to use the diving regulator while the boy’s father looks on.** (Photo from Naval Submarine Medical Research Laboratory Public Affairs)

the thumping chair was a huge hit.

“Many young people incur hearing loss by playing music too loud,” said Derek Schwaller of the Warfighter Performance Department. “Often, they will play the sound high enough to feel the bass of the music. In order to give people the sensation of being in a high-level sound field, we sent the low frequency portion of the music to a dynamic vibration source attached to a chair and we played the music into headphones.” Someone listening to music played this way would not turn the music up so loud, but would still get the sensation of feeling the music. But since the sound presented to the ears is lower, the potential for hearing damage is less.

At another hearing display, set up by the Submarine Medicine and Survival Systems Department, students were shown a simple model of eardrum mechanics. Plastic wrap was stretched tightly over a bowl and a handful of dry rice was placed on the wrap. Jennifer

McCluskey produced sound waves by hitting a metal baking pan just above the rice, moving the rice. Students could see how their eardrum reacts to sounds in their environment. McCluskey and Heather Huebner also demonstrated the sound library tool in the Military Hearing Preservation Training Kit currently under development by Dr. Lynne Marshall and an industry partner. Students donned headphones and listened to a sound of their choice, first through normal hearing and then through degraded hearing. Students were surprised at how difficult it was to understand the second sound. Huebner and McCluskey took the opportunity to stress the importance of protecting their hearing and showed them various types of hearing protection that are available.

Also on display was a submarine escape suit. The survivor puts on the suit and leaves the escape trunk after filling it with air, floating to the surface. A one-man raft, which is attached to the suit, was also on display. 🌐



NMRC Commanding Officer Capt. Richard L. Haberberger, Jr. signs a CRADA that partners the NMRC Malaria Program, WRAIR and Seattle BioMed in a cooperative effort with the Bill and Melinda Gates Foundation to promote the development of malaria vaccines. From left: Mr. Ken Hemby, Ms. Roxanne Charles, Capt. Haberberger, Capt. Thomas Richie, and Capt. Eileen Villasante.

# NMRC Enters Into Malaria Vaccine CRADA with Gates Foundation

Story and photo from Naval Medical Research Center Public Affairs

In November 2011 the Naval Medical Research Center (NMRC) Malaria program entered into a Cooperative Research and Development Agreement (CRADA) with the Bill and Melinda Gates Foundation to promote the development of malaria vaccines. In this three-year cooperative effort with the Gates Foundation, NMRC will partner with Walter Reed Army Institute of Research (WRAIR) and Seattle Biomedical Research Institute (Seattle BioMed). The objective of this research is to support the identification of biomarkers of protection to guide vaccine development and deployment of vaccines to the field.

Capt. Thomas L. Richie, the Navy's principal investigator for this effort, will be responsible for the overall program management and research oversight. In addition to conducting the clinical trial, which will involve the immunization of 16 to 20 adult volunteers via mosquito bite, scientists at NMRC and

WRAIR will conduct immunoassays and antigen discovery. Through a cooperative research agreement (CA), Seattle BioMed and potentially other partners will participate, emphasizing a systems biology approach for the identification of biomarkers. Dr. Ruobing Wang, a prominent malaria immunologist who worked for many years in the NMRC malaria program, will serve as the principal investigator at Seattle BioMed.

"Working with such excellent partners at WRAIR and Seattle BioMed will be the highlight of this project," Richie said. "We are very grateful to the Gates Foundation for this opportunity."

This unique partnership for malaria immunization via mosquito bite with radiation-attenuated *Plasmodium falciparum* sporozoites investigates a vaccine approach that kills the deadly *P. falciparum* parasite during its first few days.

The goal of this project is to significantly advance malaria vaccine development by characterizing the nature of pre-erythrocytic stage protective immunity and targeted antigens. Characteriz-

ing the immune profiles of humans protected against malaria following immunization with the radiation-attenuated *P. falciparum* sporozoites will address both the Foundation's charitable mission to eradicate malaria from the poorest countries in the world and the U.S. military's research and development priority to protect military personnel and travelers from endemic disease.

Malaria is responsible for more suffering and death across the world than any other parasitic disease. It is a blood disease leading to anemia, prostration, coma, low birth weight and poor school performance that affects as many as 225 million people annually. According to the World Health Organization, 781,000 people die each year from the infection.

U.S. military forces are at great risk of developing malaria while deployed in endemic areas. In fact, more U.S. military person-days were lost to malaria than to bullets during every military campaign fought in malaria-endemic regions during the 20th century. 🌐

# Triumph and Tragedy

By Jan K. Herman

Historian of the Navy Medical Department and Director, Benjamin Rush Education and Conference Center of the Navy Medicine Institute



**Strato-Lab pilot Cmdr. Malcolm Ross is safely back aboard USS Antietam after a record-breaking ascension to the edge of space.**  
*(Photos courtesy of U.S. Navy Bureau of Medicine and Surgery Library and Archives)*

On 4 May 1961, an aluminum cage suspended beneath a 411-foot hydrogen-filled balloon, ascended from the deck of the aircraft carrier USS Antietam (CVS-36) cruising in the Gulf of Mexico 138 miles southeast of New Orleans. In less than two hours the two-man crew had reached the very edge of space.

Strato-Lab 5 marked a series of firsts in high-altitude flight. The 113,500 maximum altitude established a new world's record for manned balloon flight. The 10,000,000-cubic foot balloon was the largest balloon ever used in manned flight. The ascent was the first ever made from the flight deck of an aircraft carrier. And the ascent was the highest made by man in an open gondola. However, in an instant, the triumph

of that mission would turn to tragedy as one of the crew members drowned in a freak accident during recovery. Moreover, another event occurring almost simultaneously, would totally eclipse the flight of Strato-Lab and consign it to obscurity.

### Precursors

High altitude balloon research was nothing new in 1961. Back in 1935 a flight sponsored jointly by the Army Air Corps and the National Geographic Society, rose to the then incredible altitude of 72,395 feet. That record remained unchallenged for two decades.

It was felt at the time that this altitude would never be surpassed by balloon because a rubber balloon expands during ascension into the stratosphere to the point where it finally bursts.

However, by the end of World War II, the Navy became interested in the use of plastics, which do not have the expansion characteristics of rubber.

The Office of Naval Research made the first plans for upper atmosphere balloon research in 1946. The high altitude data they were seeking included the fields of near space physics, nuclear energy, cosmic radiation, and human physiology.

The original project, Helios, was named for the Greek sun god. A contract with the University of Minnesota and General Mills, Inc. called for the construction of plastic balloons and a gondola equipped with a battery of scientific instruments. A sealed cabin was to be supported by 100 of the balloons

at an anticipated altitude of 100,000 feet for 10 hours.

Dr. Jean Piccard and O.C. Winzen were among the principals in the project, working with ONR's CDR George Hoover. Their concept was to use a thin plastic material which permitted a reduction in the weight of the balloon itself to only a fraction of that of a rubber balloon, thereby allowing the plastic cluster to reach a considerably higher altitude.

This ambitious plan was superseded in 1947 by Project Skyhook, which involved the use of polyethylene balloons carrying instrument packages to extreme altitudes. Thousands of these balloons were sent into the stratosphere for basic research.

In 1952, engineers developed a new technique. Skyhook balloons lifted Deacon rockets above 70,000 feet. At a fixed altitude, a pressure switch would fire the Deacon from an almost vertical position. With the aerodynamic drag of lower altitudes thus eliminated, the rocket could achieve a near vacuum ballistic trajectory and attain heights greatly in excess of those reached by surface firings.

So successful were these flights, that in 1954 there were plans to entrust the lives of men to a thin film of polyethylene plastic. Strato-Lab came into being in 1955 as a practical, economical method of obtaining fundamental data in the fields of astronomy, astrophysics, and physics of the upper atmosphere. During the next six years, five Strato-Lab flights were made, four of which used gondolas originally constructed for the abortive Helios project.

Test equipment included cameras to photograph the formation, growth, and decay of contrails created by jet aircraft, special gamma telescopes of cosmic radiation study, and, most importantly, a wide variety of aeromedical experiments. CAPT Norman Lee Barr, developed a telemetry method for recording in real time a pilot's physiological reactions, heart reactions, and respiratory conditions.

In 1956, Strato-Lab I, manned by LCDR Malcolm Ross and M.L. Lewis, attained a record altitude of 76,000 feet. Other flights sponsored by the Office of Naval Research shortly began

reaching ever higher with balloons designed to gather data in the upper atmosphere. One of the principal elements of this research was to evaluate the effects stratospheric flight had upon man.

The first manned Strato-Lab flight took place on 10 Aug 1956. The 125,000 cubic foot balloon and fiberglass gondola launched from Minneapolis, reached an altitude of 40,000 feet. Its goal was to photograph jet vapor contrails and gather other data. Constant physiological data on the pilots was telemetered to a chase plane. Special cold weather clothing protected the pilots in the -60 degree F. cold.

The Navy wasn't the only service making high altitude flights. Air Force CAPT Joe Kittinger had achieved a record altitude of 101,516 in 1960.

What was unique about Strato-Lab 5 was the gondola. Previous balloon manned flights had encased their precious human cargoes in sealed spherical aluminum or fiberglass gondolas. Strato-Lab 5's gondola was an open aluminum cage. The only things pressurized would be the two space suits worn by the crew. This flight would provide the toughest test yet for a new generation of spacesuits--the Mercury type Navy Mark IV full pressure suit operating for the first time in a near-space environment.

Strato-Lab 5 was truly a cooperative Navy effort sponsored by the Bureau of Medicine and Surgery, the Bureau of Naval Weapons, and the Office of Naval Research with technical assistance of the Naval Air Crew Equipment Laboratory, the Aviation Medical Acceleration Laboratory, and the Naval Medical Research Institute.

#### **The Crew**

CDR Malcolm D. Ross, USNR, was the pilot, and LCDR Victor A. Prather, Jr., MC, USN, was the medical observer. Ross was a veteran of several balloon flights. It was Prather's first balloon flight.

#### **The Equipment**

The helium-filled balloon, a polyethylene plastic envelope a thousandth of an inch in thickness, supported the gondola, which itself hung from a large parachute, 70 feet in diameter. It was designed to open automatically to bring

the gondola down if the balloon failed. The balloon, parachute, gondola, and the trailing antenna made the craft taller than an 80-story building. The balloon itself was needle-shaped at sea level, but took on the form of an onion at highest altitude with pressure a mere .09 pounds per square inch.

Winzen Research Inc., of Minneapolis designed the craft, an open gondola with adjustable slats, black on one side, aluminized on the other so as to either absorb or reflect the sun's heat. These slats functioned like venetian blinds to control temperature. To warm up, the aeronauts lowered the venetian blinds all around the gondola and turned the black side out, so that they would absorb energy from the sun. To cool the gondola, they turned the blinds silver side out.

Before donning their pressure suits, technicians affixed sensors to Ross and Prather. Collodion and rubber cement held the electrodes firmly in place. Such physiological data as EEGs, EKGs, rectal temperature, face and face-plate temperature, axillary (armpit), thigh, left foot and left hand temperatures would be



**Lt. Cmdr. Victor Prather suits up for the flight.**



**The Mercury type Navy Mark IV full-pressure suit was state-of-the-art in 1961.**

telemetered to the ship. Two transmitters, one for each man, were to transmit signals on such functions as respiration, pulse rate, heart beat and temperature which were relayed to six separate telemetry receivers, three for each man, located on land, sea, and in the air. This system provided protection against the malfunctioning of any individual receiver. These data were automatically recorded and transmitted directly to monitoring personnel both aboard the carrier and in tracking aircraft. The medical monitors were Navy physician CAPT Carl Pruett and Dr. Seymour Stein, a civilian, both from the Pacific Missile Range Biosciences office. Strato-Lab 5 contained the most elaborate medical monitoring telemetry network yet employed in a manned flight.

The crew was equipped with Mercury-type Navy Mark IV full pressure suits modified for this flight. The primary oxygen source for the suit was two liquid oxygen converters with a gaseous oxygen walk-around bottle for reserve or

emergency. Additionally, each suit back pack contained a bailout gaseous oxygen supply of 1 liter capacity. The main oxygen supply performed four functions. The oxygen first served to ventilate the suit by carrying moisture away from the pilot; secondly the oxygen served as a flushing system to maintain the CO<sub>2</sub> level within safe limits; third, the oxygen served for breathing purposes, and fourth, it provided the necessary pressure within the suit at higher altitudes.

The suit was designed to maintain its pressure at approximately 27,000 feet and maintain its 5psi pressure above that altitude. The gondola was completely non-pressurized and the only pressurization supplied for the air crew was through operation of the individual suit and its supporting equipment. At peak altitude, the pressure would be only .09 of a pound per square inch, compared with 14.7 at sea level. Without the heavy pressure suits blood would boil and blood vessels and organs would rupture. In short, the two crewmen would be in an environment virtually equivalent to the vacuum of space.

The Mercury-type full-pressure suits had no inherent flotation capability in the water in the absence of complete suit integrity, and that integrity depended upon the face plate that had to be closed and sealed. Unfortunately, this feature would later prove fatal.

Besides obtaining medical data, there were other goals as well. Nuclear emulsions were to be transported aloft for post-flight analysis to monitor the existence and nature of cosmic radiation.

There were also cameras aboard to record Ross and Prather throughout the flight, and to photograph the sky for meteorological purposes. Another camera would take a series of time-lapse photos of the balloon to determine its performance, and still other cameras were to photograph the sky for use in the study of cloud physics. A Navy 70mm aircraft reconnaissance camera would determine the capability of operational equipment for very high altitude reconnaissance.

Other instruments measured pressure, temperature, winds, and water vapor in the atmosphere. Some of these instruments were standard issue, others experimental. The gondola also provided

a tested for special infrared instruments being developed for satellite use.

### **The Flight Plan**

The plan was to make an early morning ascent with a planned rate of 800 feet per minute to the anticipated peak altitude of 120,000 feet. After leveling off at that altitude and floating for 1 hour, the pilot would initiate the descent at 400 feet per minute to 35,000 feet and 600 feet per minute from 35,000 to landing. Elapsed time for the flight was expected to be between 8 and 9 hours.

Launch conditions were stringent. The winds throughout the flight had to insure a landing within 150 miles of the launch site. The surface visibility at launch had to be greater than 5 miles with a ceiling at launch higher than 1,000 feet. The surface winds in the expected landing area could not exceed 15 knots and the sea conditions had to insure a reasonably stable flight deck.

### **The Flight**

Because of tears to the balloon caused during inflation, and a requisite delay in making repairs, CDR Ross considered aborting the flight. However the tears were minor and easily repaired. But the launch delay caused Dr. Prather to begin overheating, giving the medical monitors concern for his condition. That concern was taken care of and an hour later the balloon lifted off Antietam's flight deck at 0707.

The ascent was uneventful and all systems functioned satisfactorily except the electrocardiogram telemetry device on LCDR Prather, which due to his previous over-heating, had ceased to record. However this data loss was not considered integral to the flight.

Forty-five minutes after launch and at an altitude of 42,000 feet, Ross temporarily lost communication with the ship but immediately afterward the radio link was restored and the flight continued.

During the latter part of the ascent, near peak altitude, a change in the ascent indicated to Ross and the project coordinator on Antietam that some air had entered the balloon and might complicate the descent. In fact it would slow the descent rate from altitude to the level of the tropopause, and below that level the rate of descent would speed

up to higher than desired. However, even with that speeded up rate, the total descent time might exceed the oxygen supply prior to reaching a safe altitude where the balloonists could rely on outside air.

The peak altitude achieved at 0947 was recorded at 113,500 by mercury manometer, and 110,700 by beacon.

Because of air in the balloon, early prolonged valving was necessary during descent above the tropopause. This had several effects: There was a longer time than planned at near peak altitude; their descent to the tropopause was slower than planned, and the descent, after through the tropopause, was faster than originally planned. This too speedy descent required them to jettison equipment to slow that rate, and precluded a landing aboard the carrier. It would be a water landing. CDR Ross requested and received permission to open their face plates after passing 15,000 feet.

Biotelemetry from Prather ended at 40,000 feet, 62 minutes prior to landing. Biotelemetry from Ross terminated at 15,000 feet, 31 minutes prior to landing. Because their radio equipment had to be jettisoned to lighten the load, they lost voice communications 18 minutes prior to landing at an altitude of 6,300 feet.

Their skillful managing of the ballast lowered the descent rate just enough to ensure a soft water landing at latitude 28 degrees 11 minutes N and longitude 86 degrees 15 W. The balloon detached on impact and the gondola remained upright. The parachute fell into the water as planned but did not release from the gondola. The crew was unable to activate the mechanical releases as planned.

### Aftermath

The recovery of the two crewmen was to offer nothing unusual. Their gondola bobbed in the water approximately 1 mile from Antietam. The plan was to recover the crew with a motor whaleboat as the primary means of pickup. But since three helicopters were hovering nearby almost immediately, the plan suddenly changed. The decision was made to make an unrehearsed helo recovery. Both men were physically and mentally fatigued to an extreme degree but nevertheless were psychologically



Navy aeronauts in an open gondola, a precursor to what Ross and Prather would man for their historic flight.

elated from their success. Neither man had bothered to re-lower his face plate and both remained open.

When the helo lowered its seat, CDR Ross, after inviting LCDR Prather to go first, which was denied, was hoisted into the helo. Ross still had not lowered his face plate. When he grasped the cable he stepped into the seat, contrary to proper procedure, and his foot immediately slipped from the seat. Still retaining his grasp on the cable, he pulled it between his legs and slid into the seat and was hauled aboard.

Then tragedy struck. When the seat was lowered for Prather, he stood on a float attached to the side of the gondola. He grabbed the cable, pulled it toward him, and stepped onto the rescue seat with one foot, the other foot remaining on the float. The seat swung in an outboard direction and his weight pushed the gondola to the rear. He lost his grip on the cable, fell backwards into the water from about a three-foot elevation.

The crew had been under the impression that the suit was watertight. And with the face plate closed, it was. But the plate was open and Prather immediately began taking in water. By the time the helo returned and dropped a rescue swimmer, after freeing a stuck hoist, Prather had drowned.

Notwithstanding the last-minute tragedy, what had Strato-Lab accom-

plished? Besides achieving a new altitude record for manned balloon flight, Strato-Lab's instruments had determined that protons, associated with solar flare activity on the sun were of such high intensity as to have an ominous import regarding their effects on man in space. The flight had lived up to all its expectations, save one. A crewman had been tragically lost--and only after the most dangerous portion of the mission had been completed. Strato-Lab 5 had ended on a sad and embarrassing note.

Contributions of Stratolab to Manned Space Flight Program

Protons, associated with solar flare activity on the sun, were measured and found to be of such high intensity as to have an ominous import regarding their effects on man in space. This discovery necessitated development of a system whereby solar flare activity could be predicted and monitored. The mission also validated that telescope astronomy provided a means of obtaining photographs of a quality and resolution heretofore impossible with earth-bound telescopes. Subsequently, an infrared system enabled unprecedented astronomical study.

But, perhaps the legacy of Strato-Lab 5 is perhaps unknown for another reason. On the very next day, Strato-Lab would be totally eclipsed on the front pages of the world's newspapers as another expedition to the edge of space took place. On 5 May 1961, Astronaut Alan Shepard took his historic 15-minute suborbital flight. The rest is history.

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