



Pacific Partnership 2008:

U.S. Navy Fellows provide humanitarian assistance in Southeast Asia

by
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On May 1, 2008, the hospital ship USNS *Mercy* left San Diego, CA, to participate in Pacific Partnership 2008, the fourth humanitarian assistance operation in Southeast Asia in as many years. This mission is an extraordinary opportunity for not only the U.S. Navy, but also nongovernmental organizations and partner nations—such as Australia, Canada, Chile, India, Indonesia, Japan, the Republic of Korea, New Zealand, Portugal, and Singapore—to promote peace and stability in Southeast Asia and the Western Pacific, largely in regions that have been medically underserved for many years. Beginning with the tsunami relief effort in 2005, the U.S. and partner nations have maintained a steady presence throughout the South Pacific, providing medical, dental, veterinary, and engineering services to a diverse array of people and cultures. Pacific Partnership 2008 coordinated these efforts with the assistance of host nations in five countries: the Republic of the Philippines, the Socialist Republic of Viet Nam, the Democratic State of Timor Leste (also known as East Timor), the Independent State of Papua New Guinea, and the Federated States of Micronesia.

Commissioned in 1986, the USNS *Mercy* (T-AH 19) is a 1,000-bed hospital ship fashioned from a converted oil tanker whose mission is to provide medical and surgical services afloat and ashore in support of U.S. disaster relief and humanitarian operations worldwide. The Military Sealift Command is responsible for the ship navigation and maintenance. The ship has 12 operating rooms,

including an interventional radiology suite. Patient transport is by either boat or helicopter, typically two MH-60Ss, with Navy Seahawks on board. The greatest capabilities aboard lie in the skillsets of her crew. Surgical specialists represent general, oral-maxillofacial, orthopaedic, pediatric, plastic, urologic, and gynecologic surgery as well as otolaryngology and ophthalmology. In addition to the surgical capabilities, the ship is staffed with individuals representing a full spectrum of medical specialties ranging from gastroenterology to infectious disease. Ancillary services include physical therapy, blood bank, laboratory, pharmacy, biomedical repair, and radiology. The dental and optometry departments are also kept extremely busy and provide high-impact humanitarian services, often in austere surroundings. The *Mercy* serves as a unique enabling platform taking specialized medical services to the doorstep of countries that are happy to be receiving any medical treatment.

Ship vital signs: Life on USNS *Mercy*, 24/7

The odd marriage of a seagoing vessel and a hospital consumes whatever space is available. The ship, although large for a naval sailing vessel, is only 894 feet long and 105 feet wide. As a result, lodging is relatively cramped and each stateroom houses six to 10 officers with personal space limited to a locker, a few drawers, and choice of an upper or lower bunk. Four of eight decks separate the sleeping quarters from the galley and the endless flights of stairs that double as a way to burn the calories from the hearty meals. Cooks prepare more than 3,000 meals per day and are some of the hardest working people aboard. The basic diet is augmented with local fruits and vegetables, which are sometimes a treat and sometimes not. Starbucks was an unexpected luxury until the supply ran out near Timor Leste and we were relegated to drinking Maxwell House. The milk is suspect, as it comes in a small, square box with an indefinite expiration date. Meals are a chance to catch up with friends and also for sharing information and team building.

One of the immediate observations made by newcomers is the number of different groups on

Opposite page, clockwise from left:

- CDR Trent Douglas and surgical team riding the rigid hull inflatable boat back to USNS *Mercy*.
- Members of the operating room ophthalmology team in Timor Leste included nurses, surgical technicians, residents, staff surgeons, anesthesia providers, translators, and occasional visiting guests like USNS *Mercy* Ship Master, CAPT Bob Wiley (third from left).
- Patients and their escorts (usually a family member) stay on the wards the evening before and after the operation as required for postoperative care. These happy patients have changed into their clothes in preparation for departure from USNS *Mercy*. All ophthalmology patients were provided with medications and eyeglasses.
- A view of the sunset at sea.



Arriving at dawn, the USNS *Mercy* surgical screening team lands dockside ready to start the day in the Republic of the Philippines.

board. The majority of personnel are U.S. Navy, but there are also Marines, Army soldiers, Air Force personnel, Public Health Service representatives, and civilians. In addition to medical personnel, there are security forces, an aircrew, legal, public affairs, information technology, construction battalion, and Pacific Fleet Navy Band. In total, there are approximately 1,000 people aboard, all supporting the humanitarian and civic assistance mission of Pacific Partnership 2008.

Putting resources to work: Republic of the Philippines

An initial 350-person crew brought the USNS *Mercy* halfway around the world, safely arriving in Guam. After taking on an additional 500 personnel and needed supplies, the ship departed

for the Republic of the Philippines and spent the next five days traversing some 1,515 nautical miles to get to the first mission site. The *Mercy's* arrival in the southern province of Mindanao was greeted by scorching tropical sun and a level of humidity unfamiliar to all but those individuals from the Deep South. For the next two weeks, we provided high-quality care to the people of Cotobato City, Samar, Calbayog, and Zamboanga. Mindanao is an area fraught with conflict and terrorist activity. The Joint Special Operations Task Force, providing support for the Pacific Partnership mission, expertly provided security and dutifully ensured our safety. Conditional to our safety was the donning of Kevlar vests when leaving the ship while traveling between the hours of dawn and dusk and only traveling with armed escorts. While in Cotobato, one of the helicopters sustained a gunshot to the tail



Surgeons are fitted with Kevlar vests prior to embarking on land in the city of Mindanao, Republic of the Philippines.

section just below the rear rotor. Fortunately, the helicopter returned safely to the ship; the bullet hole was discovered during the pilot's postflight close inspection.

During the 12 days in the Republic of the Philippines, Pacific Partnership surgeons performed more than 200 operations involving the specialties of plastic surgery, orthopaedics, general surgery, urology, otolaryngology, pediatric surgery, gynecology, and ophthalmology. Thyroid lobectomies were frequent and it was not uncommon to operate on 10 cm to 15 cm nodules.

One of the biggest treats while in the Philippines was working with the local surgeons of the host nation. Dr. Manuel Yambao, a plastic surgeon, and Dr. George Lao, an ophthalmologist, quickly became familiar faces in the operating rooms and a welcome addition to the team. Five additional ophthalmologists from Manila also integrated with our surgeons and a participating nongovernmental organization, the 3P foundation. The success of this mission, measured both in numbers treated and new partnerships formed, was typical and would be repeated four more times over the course of the summer. As the *Mercy* moved to each new mission site, host

nation physicians and large numbers of crew members changed; the care, compassion, and quality of patient care never wavered.

One particularly touching case in the Philippines involved a special young boy who was injured in a bomb blast six years ago. He was unable to walk because of scar contractures of his left leg. His legs were atrophied and unable to be extended, yielding little to no freedom of movement. His father literally had to carry him from place to place. The boy had huge calluses on his hands from pulling his useless legs behind him as he crawled around on the ground. Orthopaedic and plastic surgeons combined to release his contractures and perform a skin graft on the resultant defect. Recognizing the extraordinary opportunity to change this boy's life, we invited him to stay on board for the entire two weeks that the ship was on site. After initiating an intense physical therapy regimen, this remarkable young man started moving around on crutches, and by the time he left us, he was riding a bike that some of the staff had purchased for him. This case was only one of the amazing stories and experiences of how the surgical team was able to provide lasting changes, and improve the life of not just one individual, but his entire family. The crew received a huge morale boost, and the Pacific Partnership mission was only getting started.

After leaving Cotobato, the *Mercy* made a three-day port call in Manila. Here, surgeons had an impact on the professional community through training, participating in an information-exchange program that invited guest lecturers at the University of Santo Tomas. Lasting friendships were made during the time spent in the Philippines, but quickly it was time to move on to the next mission site: Nha Trang, Viet Nam.

USNS *Mercy* makes history: Socialist Republic of Viet Nam

Two days later, the *Mercy* crew skillfully and safely set anchor in beautiful Nha Trang harbor in the Socialist Republic of Viet Nam. Taking in the scenery for the first time was surprising for many. It was not a dense jungle full of unknown dangers but rather a skyline that boasted luxury hotels, exclusive resorts, and tropical beaches. It

was an incredible honor to be invited to Viet Nam; this mission site would mark a number of historic “firsts,” not only for the medical staff, but for the U.S. The international impact could be epitomized by the words of one elderly veteran of the Viet Nam War: “The war belongs to the past. We are looking to the future.” Working side-by-side in the now familiar heat, Partner Nation and Vietnamese physicians evaluated patients and decided which cases would be best performed aboard the *Mercy*. Two days of surgical screening took place in a collegial but controlled setting where patients came on an appointment basis and the local custom of a three-hour daily lunch break was closely observed. The *Mercy* made history, as the surgical team became the first group of U.S. military surgeons to operate in Viet Nam since 1975. The first case, a laparoscopic cholecystectomy, was proudly performed by one of the authors (Kuncir) and assisted by the senior regional surgeon, Dr. Troung.

More patients came from the Medical Civic Action Programs (MedCAPs) with approval required by the Vietnamese Department of Health before these patients could receive care aboard the ship. In Viet Nam, the Pacific Partnership Medical staff provided care to more than 11,576 patients. The patients and their families were genuinely grateful for our care and the Vietnamese surgeons proved to be wonderful professional colleagues.

Viet Nam was an opportunity



The USNS *Mercy* staff became the first U.S. military surgeons to perform surgery in the Socialist Republic of Viet Nam since 1975.



On a surgical ward of the USNS *Mercy*, host nation and U.S. physicians do rounds during the mission in Viet Nam.



Partner nation representatives from Australia and India play cricket on the Esplanade in Nha Trang, Viet Nam.



Following two days of surgical screening at Port Moresby General Hospital, the people of Papua New Guinea treated the team to a delicious lunch buffet and traditional dance show (CDR Davis, center).



Band-aid boats transport patients, staff, and equipment back and forth from land to the anchored hospital ship throughout the mission in Timor Leste.

for medical instruction and cultural enlightenment. Dr. Le Phu, the director of ophthalmology at the local hospital, was smitten with our team approach to patient care and safety protocols. His four operating room nurses came onboard for training, an experience that they greatly enjoyed. Additional educational endeavors were

no internships, and many of the surgeons are not permitted to select a specialty but are guided to a specialty of the government's choosing. Once assigned to a specialty, surgeons serve as an understudy until mastering the specialty, a task that has no defined time period. There are no subspecialty fellowships and additional training

fulfilled through teaching basic life support and initial burn management at both Khan Hoa General Hospital and the Rehabilitation Hospital. Dr. Kuncir introduced the concept of damage control surgery for trauma during well-attended grand rounds at the regional medical center.

Medical information exchange was a key aspect of the Vietnamese mission site with everyone involved gaining insight about the procedures and processes each used. For instance, patients in Viet Nam are allowed to eat right up until the time of their surgery. For ophthalmology, there was no anesthesia support staff or monitoring available in the operating suite. The surgeon puts a gown on that he wears for the entire day, changing gloves between patients. A single operating room has three beds for simultaneous surgery. Double-armed sutures are cut in half and the unused half stored in alcohol for a future case. A flamed muscle hook is used in place of traditional cautery.

Despite limitations of consumables, the Vietnamese team was highly efficient and produced consistently excellent surgical outcomes. The medical training also differs between our two countries. Vietnamese physicians attend a combined college and medical school for six years. There are



CDR Bill Todd and CDR Ari Zakaria (Indonesia) review radiographs at surgical screening site.

comes from reading, research, and attending international conferences.

During our visit to Viet Nam, we had a few additional surprises. Cindy McCain, a board member of Operation Smile and wife of Sen. John McCain, stopped by our first surgical screening. The Miss Universe pageant was being held in Nha Trang and five of the contestants came aboard the *Mercy* for a tour. Julie Gerberding, MD, MPH, head of the Centers for Disease Control and Prevention, was also in town and visited the ship. The humanitarian and diplomatic impact our services provided was very rewarding, but everyone was in need of a break from the weeks of 12-hour mission days. The ship left Nha Trang for Singapore to take on supplies, swap out some of the crew members, and to provide the crew with needed rest and relaxation.

Adapt and overcome: Timor Leste

After five days of liberty (free time) in Singapore, the *Mercy* pulled away from her berth and carefully navigated the Singapore Straits, one of the busiest shipping channels in the world. Once in the open ocean, we headed southeast for the island of Timor Leste. During the transit, a number of us took part in one of the Navy's oldest traditions, the "crossing the line" ceremony. Starting off the day as "pollywogs," we participated in the good-humored pranks designed to test our seaworthiness as we crossed the equator to become "trusted shellbacks." Rested up, the crew was ready to take on a new mission in Timor Leste.

Timor Leste is a country with a history of political turmoil and civil unrest. The annual

income in Dili is approximately \$400. As recently as 2006, three-fourths of the population was displaced and 80 percent of the physicians had left the region. Much of the medical care currently available comes in the form of humanitarian missions and relief organizations. Limited care is available from a handful of local general practitioners doing their best with limited equipment and resources. Our mission in Timor Leste was 14 days in duration, and as at other mission sites, we relied on our advance party of both administrative personnel and physicians to coordinate with officials in the local health care system to arrange the surgical prescreening. Once ashore in the capital city of Dili, 40 of us headed for an abandoned school that would serve as our clinic to evaluate more than 250 potential patients.

Mosquitoes are a big problem in this area, with many carrying malaria or dengue fever. In an effort to reduce the risk of transmission, our uniforms were pretreated with permethrin by the preventive medicine team aboard and we wore DEET insect repellent, and took daily malarial prophylaxis in the form of Doxycycline. A friendly but heavily armed group of New Zealand Internal Stabilization Force soldiers provided a secure working environment while we cared for our patients. The locals arrived to the screening site in large groups. Many patients presented with pathology that was beyond our capabilities, such as the two-year-old with metastatic retinoblastoma and several cases of stage IV breast cancer. Many of our operative procedures on the ship were generated by the MedCAPs, where several hundred patients were seen each day by the roving medical teams.

Ophthalmology patients had advanced cataracts limiting their vision to light perception or hand motion. Following cataract removal, most could read fine print by the time they left the ship the next morning. Additional high-impact cases were completed by plastic surgery in the form of cleft repairs and major burn reconstructions.

Two weeks and 235 operations later, it was time for more supplies and a slight break before the final two missions. Each country presented its own unique challenges, and Timor Leste was no different. The helicopter crews were busy

flying patients and physicians in and out of mountain villages too difficult to access by conventional vehicles. The *Mercy* helicopters were performing double-duty because the seas were very rough and frequently made safe patient transport via the ship's 42 passenger "band-aid boat" impossible. Although it was anchored, the rough seas caused the ship to rock. Surgeons had to compensate for large-scale swaying motions that caused both fine and coarse vibrations, making microsurgery difficult at times.

Adventures ahead: Australia

We weighed anchor the next morning and steamed for Darwin, Australia. The city of Darwin and its mix of native cultures could be right out of *Crocodile Dundee*. This outback countryside is filled with large saltwater crocodiles and kangaroo steaks are on the menu at many of the local restaurants. Many of us had a chance to play the Aboriginal didgeridoo. The breaks never seemed long enough, but there were people in need and work that was to continue for the *Mercy* in two more countries.

After taking on fuel and supplies, we set our sight on Port Moresby in the Independent State of Papua New Guinea. With a new group of partner-nation surgeons, residents, and military reservists, we turned northeast and started back toward the equator. Everyone looked forward to the summer Olympics in China and since we had more than 10 nations represented on the ship, it provided for some great entertainment as we each cheered for our country's athletes.

Collegial collaboration continues: Papua New Guinea

Papua New Guinea, our fourth mission site, was another port providing cultural and medical enrichment. Our work at Port Moresby General Hospital proceeded without incident and our host nation colleagues generously treated us to an elaborate buffet lunch with local delicacies and a performance by traditional dancers adorned with body tattoos, wild boar necklaces, and feathers. Communication between us and the host nation doctors was excellent, as many



Example of advanced, hypermature cataract before surgery. This cataract and many others like it were removed and replaced with clear UV-blocking artificial intraocular lenses.



Advanced nasal and temporal pterygia in a young man in the Federated States of Micronesia. The proximity of these islands to the equator and lack of sunglass wear hastens this condition. Both fibrovascular lesions were removed resulting in a clear corneal view and lessening of astigmatism.

of the younger citizens of Papua New Guinea speak English; the remainder speaks Pidgin, which is a Franca-linga or Creole dialect. Working in this part of the world allowed many of us to see textbook cases that would not ordinarily be encountered in the U.S. In Papua New Guinea, there were advanced head and neck cancers

associated with chewing betel nut. The New Guineans grow this fruit on trees in their yards and the white gelatinous fruit is removed from its thick green coating and sucked. To improve the taste, many people have personal recipes that mix the fruit with lime and/or mustard that turns the substance orange and stains the teeth. Because of the permanent staining and mess associated with its use, betel nut was strictly forbidden aboard the ship.

Our surgical team, a well-oiled machine, was firing on all cylinders and performed a surprising 346 life-altering procedures—our highest total to date. The plastic surgery service focused on performing cleft palate cases. Seeing the beautiful new smiles and self-confidence beaming, we knew we had helped change their lives forever. The 12-day operating schedule allowed us to perform more difficult cases early on, giving ample time for recovery, and we were even able to build initial physical therapy into the lineup.

Throughout our travels, safety has been paramount. It was particularly important to maintain extremely high standards in operating procedures in Papua New Guinea, where there is a high number of people who are carriers of human immunodeficiency virus (HIV) and hepatitis. The *Mercy* laboratory virus tests for HIV and our tests revealed prevalence rates as high as 50 percent among the at-risk population. Working with partner nations, all having similar, but not identical, procedures in the operating room, we were extremely careful with sharps and, during Pacific Partnership 2008, implemented a standardized process for passing needles and scalpel blades.


Practicing medicine in a tropical paradise: Federated States of Micronesia

We left Port Moresby August 18, 2008, and arrived at our last mission site, Chuuk, Micronesia, four days later. This country is made up of hundreds of islands, a number of them uninhabited, spanning two time zones. Electricity and running water are luxuries. The islands are lush and this area is known as one of the top diving locations in the world for World War II wreckage. Despite this reputation, the country is very poor and lacks infrastructure. The Feder-

ated States of Micronesia is a U.S. protectorate and although the people have access to a higher level of health care than we had seen, health care was limited even on the most populated island of Micronesia.

As the *Mercy* steamed into the tropical paradise that is Chuuk, helicopters carried 40 staff members from the Directorate of Surgical Services to the mainland on a short, but beautiful flight to perform the surgical screening at Chuuk State Hospital. Micronesia is divided into four states and this is the only hospital serving the state of Chuuk's 53,600 people spread across 16 inner-lagoon islands. The building was a small facility with 30-bed capabilities and medical, surgical, pediatric, and obstetric care. Of note, Micronesia is located 7° north of the equator, where the sun is intense. Most of the population work on or near the water and do not wear sunglasses. This makes pterygia extremely common. Many patients have both nasal and temporal lesions. Some cover the pupil. At the mission conclusion, RADM Christine S. Hunter, the Commanding Officer of Navy Medicine West, visited the *Mercy* to thank us for our hard work over the past four months.

Mission accomplished

The practice of medicine is a great diplomatic tool. It is generally agreed that people who require care should receive it, and using the Navy and the unique platform of the *Mercy*, people are getting the help they need. Problems such as language barriers, the occasional rough seas, and being away from family pale in comparison to all that we have done. Collectively, Pacific Partnership 2008 did a lot of good for a lot of people. We examined more than 90,000 people and performed 1,370 operations. Summer 2008 gave us a taste of humanitarian medicine and showed what teamwork between the U.S. military, partner nations, and nongovernmental organizations can do to provide care and training in countries that need it most. Until the next mission, our experiences made us realize how lucky we are to practice medicine in the U.S. with freedom of specialty choice, improved access to medical care, and the luxury of consumables. 

The views expressed in this article are those of the authors and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the U.S. government.

CDR Davis has been on active duty with the U.S. Navy for 16 years.

After deployment, she will return to the Naval Medical Center San Diego (NMCS) as division head of glaucoma services and associate ophthalmology residency program director.



CDR Douglas has 13 years of active duty service and is stationed at NMCS. His current practice focuses on reconstruction of complex war injuries and breast cancer reconstruction.



CAPT Kuncir is the surgical intensive care unit director at NMCS and practices trauma and acute care surgery at University of California, San Diego, where he is an associate clinical professor of surgery. He has been in the Navy for 18 years.

