# DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2013

**WEDNESDAY, MARCH 28, 2012**

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
*Washington, DC.*

The subcommittee met at 10 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Daniel K. Inouye (chairman) presiding.

Present: Senators Inouye, Mikulski, Murray, Cochran, and Murkowski.

## DEPARTMENT OF DEFENSE

### MEDICAL HEALTH PROGRAMS

**STATEMENT OF LIEUTENANT GENERAL CHARLES B. GREEN, SURGEON GENERAL OF THE AIR FORCE**

OPENING STATEMENT OF CHAIRMAN DANIEL K. INOUYE

Chairman INOUYE. I'd like to welcome all of you, as we review the Department of Defense (DOD) medical programs this morning. There will be two panels. First, we'll hear from the Service Surgeons General, and then from the Chiefs of the Nurse Corps. Although she has appeared before the subcommittee in her previous assignment as Chief of the Army Nurse Corps, I'd like to welcome back Lieutenant General Patricia Horoho for her first testimony before this subcommittee as a Surgeon General of the Army, and commend her for becoming the first female as well as first Nurse Corps officer to serve in this capacity.

And I'd like to also welcome Vice Admiral Matthew Nathan and Lieutenant General Charles Green. General Green, I understand you're retiring later this year, and I thank you for your many years of service to the Air Force, and I look forward to working with all of you to ensure that the medical programs and personnel under your command are in good shape.

Every year, the subcommittee holds this hearing to discuss the critically important issues related to the care and well-being of our servicemembers and their families, as healthcare is one of the most basic benefits we can provide to the men and women of our Nation. The advancements military medicine has made over the last several decades have not only dramatically improved medical care on the battlefield, but it also enhanced the healthcare delivery and scientific advancements throughout the medical field. The results ben-

efit millions of Americans who likely are unaware that these improvements were developed by the military.

There is still much more to be done. Despite the great progress the military medical community has achieved, more and more of our troops are suffering from medical conditions that are much harder to identify and treat, such as traumatic brain injury (TBI), post-traumatic stress, and depression. We must continue our efforts to heal these unseen wounds of the military that have been at war for more than 10 years.

In addition, DOD has recommended changes to Military Health System (MHS) governance and proposed TRICARE fee increases. And I hope to address some of these issues today, and I look forward to your testimony and note that your full statements will be made part of the record.

And now I'd like to call upon our Vice Chairman, Senator Cochran.

OPENING STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Mr. Chairman, I'm pleased to join you in welcoming our panel of witnesses today. We appreciate the leadership you are providing in the various services—the Air Force, Army, and Navy. Our men and women in uniform deserve opportunities for high-quality medical care, and I think your leadership is proving that we do have the best in the world for our military men and women, and we appreciate that service, and that leadership, and your success. We want to find out if there are things that can be done through the Congress's efforts to help shore up weak spots or identify things that need to be changed, funding levels that may not be appropriate, because of changing circumstances. And that's what this hearing is designed to do. Thank you for helping us do our job, and we hope we help you do your job better.

Thank you.

Chairman INOUYE. Senator Mikulski.

OPENING STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Well, thank you very much, Mr. Chairman. We, in Maryland, feel so proud of military medicine, because we are the home to the new Naval Bethesda Walter Reed. That's a new facility. It's the old-fashioned values of taking care of those who fought for us. And we're very proud of that. We're very proud of the fact that Uniformed Services University of the Health Sciences (USUHS) is in Maryland, and also the fantastic TRICARE network, where our men and women on Active Duty, Reserves have access to the great academic medical institutions of Maryland and Hopkins, particularly if they need specialized care.

So, if you have a little child with pediatric neurological problems, you have access to Dr. Ben Carson. If you have a neonatal child, you have access to Maryland and to Hopkins. If you have, like one of the men I met at Walter Reed, who had dystonia, a very rare and unusual disease, again, access to Maryland there through this.

So, we're very proud of you, and we look forward to working with you, hearing from you, and how we can not only respond to the acute care needs, but really go to the new innovative ways of delivery of healthcare that manage chronic illness, prevent chronic ill-

ness, and deal with the stresses of battle, whether you're endured it in the battlefield or at home, supporting the warrior at the front. And today's a big day for healthcare, Senator Harkins having a hearing on National Institutes of Health (NIH), so after I finish my questions, I'm going to be dashing over there, your neighbor across the street.

If I could, Mr. Chairman, one point of personal Maryland privilege. One of the worst traffic jams in American history is at the convergence of Walter Reed Naval Bethesda. It's across the street from NIH. On the corner is the Institute of Medicine. It is the largest convergence of intellectual brainpower to serve the healthcare needs, and they're all at the same traffic light, at the same time. And if you want to see geniuses throwing Petri dishes at people, just come to that.

So, we want to thank you for your help in cracking that transportation bottleneck. Am I right? Yes.

Chairman INOUYE. That's right.

Senator MIKULSKI. That's got the biggest applause going yet.

SUMMARY STATEMENT OF LIEUTENANT GENERAL CHARLES B. GREEN

Chairman INOUYE. General Green, if I may begin with you, Sir. Would you care to make a statement before we proceed?

General GREEN. Yes, Sir. Thank you. Good morning.

Chairman Inouye, Vice Chairman Cochran, distinguished members of the subcommittee, thank you for inviting me here today. The Air Force Medical Service cannot achieve our goals of readiness, better health, better care, and best value without your support. We thank you for this.

To meet these goals, the Air Force Medical Service is transforming deployable capability, building patient-centered care, and investing in education training and research to sustain worldwide and world-class healthcare. This year, we established 10 new expeditionary medical support health response teams. These 10-bed deployable hospitals enable us to provide emergency care within 30 minutes of arriving on scene, and do surgery within 5 hours. And this will happen in any contingency. Light and lean, it's transportable in a single C–17, with full-base operating support requiring only one additional aircraft.

The health response team was successfully used in Trinidad for a humanitarian mission last May, and is our new standard package for rapid battlefield care and humanitarian assistance.

Critical care air transport teams and air evacuation continue to be a dominant factor in our unprecedented high-survival rates. To close the gap in en route critical care continuum, we applied the Critical Care Air Transportation Team (CCATT) concept to tactical patient movement and delivered the same level of care during inter-theater transport on rotary platforms this year.

The tactical critical care evacuation team was fielded in 2011. We've trained five teams. Two teams are currently deployed to Afghanistan. Each team has an emergency physician and two nurse anesthetists, and we're now able to move critical patients between level two and level three facilities much more safely.

At home, we enrolled 941,705 beneficiaries in the team-based patient-centered care at all of our Air Force medical facilities world-

wide. This care model is reducing emergency room visits, improving health indicators, and it has achieved an unprecedented continuity of care for our military beneficiaries. The Air Force remains vigilant in safeguarding the well-being and mental health of our people. Postappointment health reassessment completion rates are consistently above 80 percent for our Active Duty, Guard, and Reserve personnel.

The new deployment transition center at Ramstein Air Base, Germany, provides effective reintegration programs for deploying troops. More than 3,000 have been through to date, and a study of these airmen who attended showed significantly fewer symptoms of post-traumatic stress and lower levels of both alcohol use and conflict with family or coworkers upon return home.

By this summer, behavioral health providers will be embedded in every primary care clinic in the Air Force. We reach Guard and Reserve members through tele-mental health and embedded psychological health directors, and are furthering increasing mental health provider manning over the next 5 years.

New training to support air evacuation and expeditionary medical capability is now in place. Our training curriculums are continuously updated to capture lessons from 10 years of war. Our partnerships with civilian trauma institutions prove so successful in maintaining wartime skills that we've expanded training sites to establish new programs with the University of Nevada—Las Vegas, and Tampa General Hospital. We also shifted our initial nursing training for new Air Force nurses to three civilian medical centers. The nurse transition program is now at the University of Cincinnati, Scottsdale, and Tampa Medical Centers, has broadened our resuscitative skills, and the experience that they receive early in their careers.

Air Force graduate medical education programs continue to be the bedrock for recruiting top physicians. Our graduate programs are affiliated with Uniform Services University and civilian universities. These partnerships build credibility in the United States and in the international medical communities.

One of our most significant partners is the Department of Veterans Affairs (VA), and we are very proud of our 6 joint ventures, 59 sharing agreements, and 63 joint incentive fund projects, which are improving services to all of our beneficiaries. We've also made significant progress to the integrated electronic health record to be shared by DOD and the VA.

In the coming year, we will work shoulder-to-shoulder with our Army, Navy, and DOD counterparts to be ready to provide even better health, better care, and best value to America's heroes. Together, we'll implement the right governance of our MHS, we'll find efficiencies, and provide even higher quality care with the resources we are given.

PREPARED STATEMENT

I thank this subcommittee for your tremendous support to military medics. Our success both at home and on the battlefield would not be possible without your persistence and generous support.

On a personal note, I thank you for your tolerance and for having me here, now the third time, to talk to you about Air Force medicine. I look forward to answering your questions.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL (DR.) CHARLES B. GREEN

INTRODUCTION

Mr. Chairman, Vice Chairman, and distinguished members of the subcommittee: Thank you for inviting me to appear before you today. The men and women of the Air Force Medical Service (AFMS) have answered our Nation's call and maintained a standard of excellence second to none for more than a decade of sustained combat operations. We provide servicemembers, retirees, and families the best care America has to offer. We take tremendous pride in providing "Trusted Care Anywhere" for the Nation.

We support the President's budget request and the proposed changes to the military health benefit. I am confident that the recommendations included in the budget reflect the proper balance and the right priorities necessary to sustain the benefit over the long term. National healthcare costs continue to rise at rates above general inflation, and the Department of Defense (DOD) is not insulated from this growth as we purchase more than 60 percent of our care from private sector. DOD beneficiaries' out-of-pocket costs with the proposed changes remain far below the cost-sharing percentage they experienced in 1995. We understand we cannot ask our beneficiaries to share more of the cost for healthcare without seeking significant internal efficiencies. We are increasing efficiency by reducing administrative costs, improving access, recapturing care, and introducing cutting-edge technology to better connect our providers and patients.

Ready, better health, better care, and best value are the components of the quadruple aim for the Military Health Services. To meet these goals, the AFMS set priorities to transform deployable capability, build patient-centered care, and invest in education, training, and research to sustain world-class healthcare. We have made significant inroads in each of these areas over the past year.

TRANSFORM DEPLOYABLE CAPABILITY

In times of war there are always significant advances in the field of medicine. Today we are applying these lessons to shape future readiness and care. We have found new ways to manage blood loss and improve blood replacement. Significant improvements in the blood program improved transfusion capability and changed the way we use fluids to resuscitate patients. Air Force trauma surgeons in deployed hospitals better control hemorrhage and treat vascular injury by designing and using new arterial shunts that have been adopted by civilian trauma surgeons. These innovations contribute to a very low-case fatality rate and allow earlier transport of casualties.

Through innovative training and quick thinking, Air Force, Army, and Navy medics continue to perform miracles in field hospitals. Last spring in Balad, Iraq, our Critical Care Air Transport Teams (CCATT) saved the life of a soldier who had suffered blunt force trauma to his chest, causing his heart to stop. After an unknown period without a pulse, there was significant risk of brain injury. Using coolers of ice, the team undertook a rare therapeutic hypothermia procedure to lower body temperature, decreasing tissue swelling, and damage to the brain. The soldier was transported to Landstuhl Medical Center in Germany where his temperature was slowly raised, bringing him back to consciousness. Within 4 days of injury, the soldier arrived at Brooke Army Medical Center, San Antonio, Texas, and walked out of the hospital with thankful family members. Incredible ingenuity, dedication, and teamwork continue to save lives every day.

We have an impressive legacy of building highly capable deployable hospitals over the past decade. This year we have established 10 new Expeditionary Medical Support (EMEDS) Health Response Teams (HRT). These newly tested and proven 10-bed packages enable us to arrive in a chaotic situation, provide emergency care within 30 minutes, and perform surgery within 5 hours of arrival. The entire package is transportable in a single C–17, and full-base operating support for the hospital requires only one additional C–17. The HRT was used successfully in a Trinidad humanitarian mission in April and will be our standard package to provide rapid battlefield medicine and humanitarian assistance. This year we will establish intensive training with the HRT and will expand its capability with additional mod-

ular sets to respond to specialized missions such as obstetrics, pediatrics, or geriatrics required for humanitarian response.

We are also pursuing initiatives to improve air evacuation capability. New advances in ventilators allow us to move patients sooner and over longer distances with less oxygen. We pursued new capabilities for heart-lung bypass support by reducing the size of extracorporeal membrane oxygenation (ECMO) equipment. ECMO has been in use for many years transporting neonatal patients, and we now have critical care teams using this advanced technology for adult patient transportation. We moved the first patient on full heart-lung bypass out of Afghanistan in 2011. We are working to miniaturize and standardize ECMO equipment so it can be operated by less specialized teams. David Grant Medical Center at Travis Air Force Base (AFB), California, recently became the first DOD recipient of the smallest ECMO device. Known as CARDIOHELP, the device is light enough to be carried by one person and compact enough for transport in a helicopter or ambulance. Researchers will utilize CARDIOHELP to evaluate the effects of tactical, high-altitude, and long-haul flights on patients who require the most advanced life support. We continue to advance the science of patient transport moving the sickest of the sick, as we decrease the amount of time from point-of-injury to definitive care in the United States.

The insertion and integration of CCATTs into the air evacuation (AE) system continues to be a dominant factor in our unprecedented high-survival rates. These teams speed up the patient movement process, bring advanced care closer to the point-of-injury, free up hospital beds for new causalities, allow us to use smaller hospitals in-theater, and move patients to definitive care sooner. We have improved CCATT equipment with more wireless capability aboard aircraft to simplify connection of medical equipment to critical care patients. We are continuously finding better technologies for more accurate patient assessment in flight and working to standardize equipment and supplies used by coalition teams.

We developed and fielded the Tactical Critical Care Evacuation Team (TCCET) in 2011. This team was built to deliver the same level of care during intra-theater transport on non-AE platforms as that provided by our CCATT teams. Our first deployed team safely transported 130 critical patients on rotary aircraft. The team is composed of an emergency physician and two nurse anesthetists that separate and fly individually with a pararescue airman to move the sickest patients. We are now able to move critical patients between Level II and Level III facilities in theater even more expeditiously, using either rotary or fixed wing aircraft.

The Theater Medical Information Program Air Force (TMIP–AF) continues to make tremendous progress supporting the war-fighting community both on the ground and in the air. We leveraged existing information management and technology services to integrate with Line of the Air Force communication groups at all deployed Air Force ground-based units. This decreased end user devices, numbers of personnel at risk, and contractor-support requirements in theater. This integration allowed us to remotely support deployed units from State-side locations for the first time and with improved timeliness. Today, AFMS units are documenting all theater-based patient care electronically, including health records within the AE system, and securely moving information throughout the DOD healthcare system.

## BUILD PATIENT-CENTERED CARE

At home, we continue to advance patient-centered medical home (PCMH) to improve delivery of peacetime healthcare. The foundation of patient-centered care is trust, and we have enrolled 920,000 beneficiaries into team-based, patient-centered care. Continuity of care has more than doubled with patients now seeing their assigned physician 80 percent of the time and allowing patients to become more active participants in their healthcare. PCMH will be in place at all Air Force medical treatment facilities (MTFs) by June of this year. The implementation of PCMH is decreasing emergency room visits and improving health indicators.

We have also implemented pediatric PCMH, focused on improving well child care, immunizations, reducing childhood obesity, and better serving special needs patients. A recent American Academy of Pediatrics study analyzed the impact of medical home on children. Their report concluded, "Medical home is associated with improved healthcare utilization patterns, better parental assessment of child health, and increased adherence with health-promoting behavior." We anticipate completing Air Force pediatric PCMH implementation this summer through simple realignment of existing resources.

Our PCMH teams are being certified by the National Committee for Quality Assurance (NCQA). NCQA recognition of PCMH is considered the current gold standard in the medical community, with recognition levels ranging from 1–3, 3 being the

highest. To date, all MTFs who completed evaluation were officially recognized by NCQA as a PCMH, with 10 sites recognized as a level 3. This level of excellence far exceeds that seen in the Nation overall. An additional 15 Air Force sites will participate in the NCQA survey in 2012.

We are enabling our family healthcare teams to care for more complex patients through Project Extension for Community Healthcare Outcomes (ECHO). This program started at the University of New Mexico to centralize designated specialists for consultation by local primary care providers. ECHO allows us to keep patients in the direct care system by having primary care providers "reach back" to designated specialists for consultation. For example, rather than send a diabetic patient downtown on a referral to a TRICARE network endocrinologist, the primary care team can refer the case to our diabetes expert at the 59th Medical Wing, Lackland AFB, Texas, without the patient ever departing the clinic. ECHO now includes multiple specialties, and has been so successful, the concept has been adopted by the Mayo Clinic, Johns Hopkins, Harvard, DOD, and the Veterans Administration (VA).

Our personalized medicine project, patient-centered precision care (PC2), which builds on technological and evidence-based genomic association, received final Institutional Review Board approval. We enrolled the first 80 patients this year with a goal of enrolling 2,000 patients in this research. PC2 will allow us to deliver state-of-the-art, evidence-based, personalized healthcare incorporating all available patient information. A significant aspect of PC2 is genomic medicine research, the advancement of genome-informed personalized medicine. With a patient's permission, we analyze DNA to identify health risks and then ensure follow up with the healthcare team. De-identified databases will allow us to advance research efforts. Research groups can determine associations or a specific area where they think there may be merit in terms of how we can change clinical practice. This research will likely change the way we view disease and lead to much earlier integration of new treatment options.

MiCare is currently deployed to our family practice training programs and will be available at 26 facilities before the end of 2012. This secure messaging technology allows our patients to communicate securely with their providers via email. It also allows our patients to access their personal health record. Access to a personal health record will provide the ability to view lab test results at home, renew medications, and seek advice about nonurgent symptoms. Healthcare teams will be able to reach patients via MiCare to provide appointment reminders, follow up on a condition without requiring the patient to come to the MTF, provide medical test and referral results, and forward notifications on various issues of interest to the patient. We anticipate full implementation by the end of 2013.

We are also testing incorporation of smart-phones into our clinics to link case managers directly to patients. Linking wireless and medical devices into smart phones allows the patient to transmit weight, blood pressure, or glucometer readings that are in high-risk parameters directly to their health team for advice and consultation. Patients with diabetes or congestive heart failure can see significant reductions in hospitalizations when interventions with the healthcare team are easily accessible on a regular basis. This improves quality of life for the diabetic or cardiology patient, reduces healthcare costs, and increases access for other patients. We have a pilot effort underway with George Washington University Hospital to use this tool in diabetes management.

Safeguarding the well-being and mental health of our people while improving resilience is a critical Air Force priority. We remain vigilant with our mental health assessments and consistently have postdeployment health reassessment (PDHRA) completion rates at 80 percent or higher for Active Duty, Guard, and Reserve personnel. In January 2011, we implemented section 708 of the 2010 National Defense Authorization Act (NDAA) for Active-Duty airmen, and in April 2011, for the Reserve component. The two-phased approach requires members to complete an automated questionnaire, followed by a person-to-person dialogue with a trained privileged provider. Whenever possible, these are combined with other health assessments to maximize access and minimize inconvenience for deployers. Each deployer is screened for post-traumatic stress disorder (PTSD) four times per deployment including a person-to-person meeting with a provider.

Although Air Force PTSD rates are rising, the current rate remains low at 0.8 percent across the Air Force. Our highest risk group is explosive ordnance disposal (EOD) at about 7 percent, with medical personnel, security forces, and transportation at less risk, but higher than the Air Force baseline. Our mental health providers, including those in internships and residencies, are trained in evidence-based PTSD treatments to include prolonged exposure, cognitive processing therapy, and cognitive behavioral couples therapy for PTSD. Virtual Iraq/Afghanistan uses computer-based virtual reality to supplement prolonged exposure therapy at 10 Air

Force sites. Diagnosis is still done through an interview, supported by screening tools such as the PTSD checklist (PCL) and other psychological testing as clinically indicated.

We are working closely with Air Force leadership to inculcate healthy behaviors. Comprehensive airmen fitness focuses on building strength across physical, mental, and social domains. Airman resiliency training (ART) provides a standardized approach to pre-exposure preparation training for redeploying airmen, including tiered training that recognizes different risk groups. Traumatic stress response teams at each base foster resiliency through preparatory education and psychological first-aid for those exposed to potentially traumatic events.

The Deployment Transition Center (DTC) at Ramstein Air Base, Germany, soon to be 2 years old, provides an effective reintegration program for our redeploying troops. More than 3,000 deployers have now processed through the DTC. A study of the first 800 airmen to go through the DTC, compared with 13,000 airmen matched to demographics, mission set, and level of combat exposure, demonstrated clear benefit from the DTC. Analyzing their PDHRA, airmen who attended the DTC showed positive results—significantly fewer symptoms of post-traumatic stress, lower levels of alcohol use, and lower levels of conflict with family/coworkers. This study provided solid evidence that the DTC helps airmen with reintegration back to their home environment. We are now partnering with the RAND Corporation in two other studies, looking at the overall Air Force resilience program and studying the effectiveness of the current ART program.

While we experienced a drop in the Active-Duty suicide rate in 2011, we remain concerned. Guard and Reserve suicide levels have remained steady and low. The major risk factors continue to be relationship, financial, and legal problems, and no deployment or history of deployment associations have been found. We strive to find new and better ways to improve suicide prevention efforts across the total force. By summer of this year, we will embed behavioral health providers in primary care clinics at every MTF. The Behavioral Health Optimization program (BHOP) reduces stigma by providing limited behavioral health interventions outside the context of the mental health clinic, offering a first stop for those who may need counseling or treatment. The Air Reserve Components instituted on-line training tools and products that support Ask, Care, Escort (ACE), our peer-to-peer suicide prevention training. The Air Force Reserve Command also added a new requirement for four deployment resilience assessments beginning last April.

We are increasing our mental health provider manning over the next 5 years with more psychiatrists, psychologists, social workers, psychiatric nurse practitioners, and technicians. We increased Health Professions Scholarship Program (HPSP) scholarships for psychologists, as well as psychiatry residency training billets and the psychology Active-Duty Ph.D. program and internship billets. To enhance social worker skills, we placed social workers in four internship programs and dedicated HPSP scholarships and Health Professions Loan Repayment Program slots for fully qualified accessions. Accession bonuses for fully qualified social workers were approved for fiscal year 2012 for 3- and 4-year obligations. These actions will help us to meet mental health manning requirements for both joint deployment requirements and at home station in compliance with section 714 in the 2010 National Defense Authorization Act. Air Force tele-mental health is now in place at 40 sites across the Air Force, and is planned for a total of 84 sites.

Like our sister Services, the Air Force continues to be concerned about, and focused on, the consequences of traumatic brain injury (TBI). We fully implemented TBI testing across the Air Force, and collected more than 90,000 Automated Neurological Assessment Metric (ANAM) assessments in the data repository. The Air Force accounts for 10–15 percent of total TBI in the military with approximately 4 percent of deployment-associated TBI. Most Air Force cases, more than 80 percent, are mild in severity. Of all our completed postdeployment health assessments and reassessments, less than 1 percent screened positive for TBI with persistent symptoms.

Despite our relatively lower incidence, the Air Force continues to work with DOD partners to better understand and mitigate the effects of TBI. In collaboration with Defense and Veterans Brain Injury Center, Air Force, and Army radiologists at the San Antonio Military Medical Center are working jointly to study promising neuroimaging techniques including volumetric magnetic resonance imaging (MRI) using the Federal Drug Administration-approved software NeuroQuant, functional MRI, spectroscopy, and diffusion tensor imaging to identify structural changes that may result from TBI. Ongoing studies will find more definitive answers to this complex diagnostic and treatment problem.

As co-chairman of the Recovering Warrior Task Force, I have come to understand all Services Wounded Warrior Programs. I have been on site visits with our com-

mittee as we seek to discern best practices to help our wounded, ill, and injured members recover. The joint efforts of DOD and the Department of Veterans Affairs to streamline the integrated delivery evaluation system (IDES) are paying dividends. In the Air Force, we are augmenting pre-Medical Evaluation Board (MEB) screening personnel to streamline IDES processing. Our electronic profile system gives us full visibility of those in the process and close coordination with the VA is reducing the time to complete the IDES processing.

INVEST IN EDUCATION, TRAINING, AND RESEARCH

Providing "Trusted Care Anywhere" requires our people to have the best education and training available to succeed in our mission. We strive to find new and better ways to ensure our Airmen not only survive but thrive.

This is the goal of the Medical Education and Training Campus (METC), and it truly is a joint success story. METC has already matriculated 10,000 graduates from the Army, Navy, and Air Force, and now has numerous international students enrolled. The majority of the services' education and training programs have transferred to METC, and the remainder will transfer during the course of this year. The Institute for Credentialing Excellence (ICE) awarded METC the ICE Presidential Commendation for the pharmacy technician program and praised it as being the best program in the United States.

Air Force graduate medical education (GME) programs continue to be the bedrock for recruiting top-notch medics. Since the 1970s, many of our GME programs have been affiliated with renowned civilian universities. These partnerships are critical to broad-based training and build credibility in the U.S. and international medical communities. GME residencies in Air Force medical centers develop graduates who are trained in humanitarian assistance, disaster management, and deployment medicine. National recognition for top quality Air Force GME programs improves our ability to recruit and retain the best. First-time pass rates on specialty board exams exceeded national rates in 26 of 31 specialty areas, and stand at 92 percent overall for the past 4 years.

Over the next few years, we will transform training to support new assets in air evacuation and expeditionary medical support. Flight nurse and technician training and AE contingency operations training curriculums have been entirely rewritten to capture lessons from 10 years of war. The Centers for Sustainment of Trauma and Readiness Skills (C–STARS) in Baltimore, St. Louis, and Cincinnati, have been extraordinarily successful in maintaining wartime skills. We have expanded training sites to establish sustainment of traumas skills—Sustainment of Trauma and Resuscitation Skills Programs (STARS–P)—to University of California Davis, Scottsdale, University of Nevada-Las Vegas, and Tampa General Hospitals. This will include greater use of simulation at C–STARS, STARS–P, and other Air Force medical sites. We have many testimonials from deployed graduates who credit their competence and confidence in theater to C–STARS and STARS–P training. We will continue efforts to expand this training so we will have full-up trauma teams and CCATT that are always ready to go to war.

One of our most significant partners in GME and resource-sharing is the Department of Veterans Affairs. We are proud of our 6 joint ventures, 59 sharing agreements, and 63 Joint Incentive Fund (JIF) projects, all win-wins for the military member, veteran, and American taxpayer. All four Air Force JIF proposals submitted for fiscal year 2012 were selected. These include a new CT Scan at Tyndall AFB, Florida, that will also benefit the Gulf Coast VA Health Care System (HCS); establishment of an orthopedic surgery service for Mountain Home AFB, Idaho, and the Boise VAMC; funding for an additional cardiologist at Joint Base Elmendorf-Richardson and the Alaska VA HCS—critical to reducing the number of patients leaving our system of care; and an ophthalmology clinic at Charleston with the Naval Health Clinic Charleston and the Charleston VA Medical Center. The JIF program is extremely helpful in supporting efficiencies that make sense in the Federal Government, while improving access to care for our beneficiaries.

Collaboration with the VA in the Hearing Center of Excellence (HCE) continues as we pursue our goals of outreach, prevention, enhanced care, information management, and research to preserve and restore hearing. Compounding hearing loss related to noise, the effect of improvised explosive devices (IEDs) that military personnel experience in Iraq and Afghanistan expands the threat and damage to the audiovestibular system. Traumatic brain injury may damage the hearing senses and the ability to process sound efficiently and effectively. Dizziness is common, and almost one-half of servicemembers with TBI complain of vertigo following blast exposure.

We are coordinating and integrating efforts with the other congressionally mandated centers of excellence to ensure the clinical care and rehabilitation of the Nation's wounded, ill, and injured have the highest priority. Partnering with the Defense and Veterans Eye Injury Registry has resulted in the Joint Theater Trauma Registry adding ocular and auditory injury modules to look at the effect and relation eye and ear injury has on TBI and psychological health rehabilitation. And the Vision Center of Excellence under Navy lead and HCE have contributed to the planning, patient management, and clinical guidelines with the National Intrepid Center of Excellence, the Center for the Intrepid, and within the Institute of Surgical Research.

We have expanded our research with the opening of the new School of Aerospace Medicine at Wright Patterson and our collaborative efforts with the Army in the San Antonio Military Medical Center. The 59th Medical Wing at Lackland AFB, Texas, is using laser treatment to improve range of motion and aesthetics in patients with burn scars. In the 10 subjects enrolled to date in the research, the laser treatments have resulted in an immediate reduction in scar bulk, smoothing of irregularities, and the production of scar collagen. The scars have also shown improved pliability, softness, and pigmentation. This is encouraging for our wounded warriors and servicemembers who have received thermal or chemical burns.

Another promising laser initiative is the Tricorder Program, a collaboration effort with the University of Illinois, Chicago, designed to detect/characterize laser exposure in "real time," assisting in the development of force health protection measures, such as laser eye protection. Air Force and Navy testers evaluated the prototype laser sensors in simulated air and ground field environments. An upcoming exercise with the FBI Operational Technology Division will assess the laser sensor for forensic capability in a domestic aircraft illumination scenario.

Another collaborative effort, with the Department of Homeland Security, is the development of an environmental/medical sensor integration platform that provides real-time data collection and decision support capability for medical operators and commanders, integrating environmental and medical sensor data from the field into a hand-held platform. The sensor integration platform was demonstrated successfully several times, including its deployment for environmental monitoring capability with the Hawaii National Guard, where the platform quadrupled Hawaii's radiation monitoring capability after the tsunami in Japan. It is now the backbone of Hawaii's State civil defense system real-time environmental monitoring capability.

The U.S. Air Force School of Aerospace Medicine (USAFSAM), Wright-Patterson AFB, Ohio, developed the cone contrast test (CCT) for detection of color vision deficiency. The CCT was selected as a winner of the 2012 Award for Excellence in Technology Transfer, presented annually by the Federal Laboratory Consortium to recognize laboratory employees who accomplished outstanding work in the process of transferring a technology developed by a Federal laboratory to the commercial marketplace. The technology was developed by vision scientists in USAFSAM's Aerospace Medicine Department and uses computer technology to replace the colored dot Ishihara Plates developed in the early 1900s. The CCT indicates vision deficiency type and severity, and can distinguish hereditary color vision loss from that caused by disease, trauma, medications, and environmental conditions—ensuring pilot safety while facilitating the detection and monitoring of disease.

THE WAY AHEAD

I look back 10 years to 9/11 and marvel at how far we have come in a decade. While sustaining the best battlefield survival rate in the history of war, we have simultaneously completed complex base realignment and closure projects, and enhanced our peacetime care worldwide. We changed wartime medicine by moving the sickest of the sick home to the United States within 3 days, while shifting 1 million enrolled patients into team based, patient-centered care that improved continuity of care 100 percent. One thing has not changed . . . the talent, courage, and dedication of Air Force medics still inspires me every day. As I retire later this year, I know that I leave our Air Force family in exceptional hands. Air Force medics will always deliver "Trusted Care, Anywhere" for this great Nation.

The AFMS will work shoulder-to-shoulder with our Army, Navy, and DOD counterparts to be ready, and provide better health, better care, and best value to America's heroes. Together we will implement the right governance of our Military Health System. We will find efficiencies and provide even higher quality care with the resources we are given. I thank this subcommittee for your tremendous support to military medics. Our success, both at home and on the battlefield, would not be possible without your persistent and generous support. Thank you.

Chairman INOUYE. Thank you, Sir.

Admiral Nathan.

**STATEMENT OF VICE ADMIRAL MATTHEW L. NATHAN, SURGEON GENERAL OF THE NAVY**

Admiral NATHAN. Good morning, Chairman Inouye, Vice Chairman Cochran, and Senator Mikulski, distinguished members of the subcommittee. Thank you for the opportunity to provide this update on Navy Medicine, including some of our strategic priorities, accomplishments, and opportunities.

I report to you that Navy Medicine remains strong, capable, and mission-ready to deliver world-class care anywhere, anytime, as is our motto. We're meeting our operational wartime commitments, including humanitarian assistance and disaster response, and concurrently delivering outstanding patient- and family-centered care to our beneficiaries.

Force health protection is what we do, and is at the very foundation of our continuum of care in support of the warfighter, and optimizes our ability to promote, protect, and restore their health. One of my top priorities since becoming the Navy Surgeon General in November has been to ensure that Navy Medicine is strategically aligned with the imperatives and priorities of the Secretary of the Navy, the Chief of Naval Operations, and the Commandant of the Marine Corps—all of my bosses.

Each day, we are fully focused on executing the operational missions and core capabilities of the Navy and Marine Corps, and we do this by maintaining warfighter health readiness, delivering the continuum of care from the battlefield, to the bedside, from the bedside, to the unit, to the family, or to transition.

Earlier this month, Secretary Mabus launched the 21st Century Sailor and Marine program, a new initiative focused on maximizing each sailor's and marine's personal readiness. This program includes comprehensive efforts in areas that are key, such as reducing suicides, and suicide attempts, curbing alcohol abuse, and reinforcing zero tolerance on the use of designer drugs or the newly arising synthetic chemical compounds. It also recognizes the vital role of safety and physical fitness in sustaining force readiness. Navy Medicine is synchronized with these priorities and stands ready to move forward at this pivotal time in our service's history. We appreciate the subcommittee's strong support of our resource requirements.

The President's budget for fiscal year 2013 adequately funds Navy Medicine to meet its medical mission for the Navy and the Marine Corps. We recognize the significant investments made in supporting military medicine, and providing a strong, equitable, and affordable healthcare benefit for our beneficiaries. Moving forward, we must operate more jointly, we must position our direct care system to recapture private sector care, and deliver best value to our patients.

A few specific areas of our attention. Combat casualty care, Navy Medicine, along with our Army and Air Force colleagues, are delivering outstanding combat casualty care. There is occasionally discussion about what constitutes world-class care, and I can assure you that the remarkable skills and capabilities in a place like the

Role 3 facility, at the multinational medical unit in Kandahar, Afghanistan, is delivering truly world-class trauma care.

Traumatic brain injury (TBI), post-traumatic stress, and post-traumatic stress disorder (PTSD): Caring for our sailors and marines suffering with TBI and PTSD remains a top priority. We must continue active and expansive partnerships with other services, our Centers of Excellence, the VA, and leading academic medical and research centers to make the best care available to our warriors afflicted with TBI. I have been encouraged by our progress, but I'm not yet satisfied.

Warrior recovery: Our wounded, ill, and injured servicemembers need to heal in mind, body, as well as spirit, and they deserve a seamless and comprehensive approach to their recovery. We must continue to connect our heroes to a proved emerging and advanced diagnostic and therapeutic options, but within our medical treatment facilities and outside of military medicine, through the collaborations with major medical centers of reconstructive and regenerative medicine. This commitment can never waiver.

And finally, Medical Home Port: We've completed our initial deployment of Medical Home Port, which is basically patient-centered medical homes, as utilized in some of the larger organizations in the civilian sector, and the preliminary reports from the first sites of Navy Medicine show better health, better value, and less cost utilization of those enrolled.

Our innovative research and outstanding medical education are truly force multipliers. Our critical overseas laboratories provide not only world-class research but invaluable engagement with host and surrounding nations to strengthen the theater security cooperation in longstanding research facilities that reside in places like Egypt, South America, Southeast Asia.

We continue to welcome and leverage our joint relationships with the Army, the Air Force, the VA, as well as other Federal and civilian partners in these important areas. I believe this interoperability helps us create system-wide synergies and allows us to invest wisely in education and training, research, and information technology.

None of these things would be possible without our professional and dedicated workforce. More than 60,000 men and women, Active Duty, Reserve personnel, civilians and contractors, all working the world to provide outstanding healthcare and support services to our beneficiaries.

PREPARED STATEMENT

In closing, let me briefly address the MHS governance. The Deputy Secretary of Defense has submitted his report to the Congress, required by section 716 of fiscal year 2012 National Defense Authorization Act (NDAA). It addresses the Department's plans, subject to review, and concurrence by the Government Accountability Office (GAO), to move forward with governance changes. Throughout my remarks this morning, and in my statement for the record, I have referred to our commitment to jointness in theater, in our classrooms, in our training, in our laboratories, and in our common pursuit of solutions like challenges like TBI. We all recognize the need for interoperability and cost-effective joint solutions, in terms

of overall governance. We must, however, proceed in a deliberate and measured manner to ensure that our readiness to support our services missions and core war fighting capabilities will be maintained, and our excellence in healthcare delivery will be sustained.

On behalf of the men and women in Navy Medicine, I want to thank this subcommittee for your tremendous support, your confidence, and your leadership, and I look forward to your questions.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF VICE ADMIRAL MATTHEW L. NATHAN

INTRODUCTION

Chairman Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee: I am pleased to be with you today to provide an update on Navy Medicine, including some of our collective strategic priorities, accomplishments, and opportunities. I want to thank the subcommittee members for the tremendous confidence and support of Navy Medicine.

I can report to you that Navy Medicine remains strong, capable, and mission-ready to deliver world-class care, anytime, anywhere. We are operating forward and globally engaged, no matter what the environment and regardless of the challenge. The men and women of Navy Medicine remain flexible, agile, and resilient in order to effectively meet their operational and wartime commitments, including humanitarian assistance; and concurrently, delivering outstanding patient and family-centered care to our beneficiaries. It is a challenge, but one that we are privileged to undertake.

One of my top priorities since becoming the Navy Surgeon General in November 2011 is to ensure that Navy Medicine is strategically aligned with the imperatives and priorities of the Secretary of the Navy, Chief of Naval Operations, and Commandant of the Marine Corps. We are fully engaged in executing the operational missions and core capabilities of the Navy and Marine Corps—and we do this by maintaining warfighter health readiness, delivering the continuum of care from the battlefield to the bedside and protecting the health of all those entrusted to our care. Our focus remains in alignment with our Navy and Marine Corps leadership as we support the defense strategic guidance, "Sustaining U.S. Global Leadership: Priorities for the 21st Century" issued by the President and Secretary of Defense earlier this year. The Chief of Naval Operations in his "Sailing Directions" has articulated the Navy's core responsibilities and Navy Medicine stands ready as we move forward at this pivotal time in our history.

Navy Medicine appreciates the subcommittee's strong support of our resource requirements. The President's budget for fiscal year 2013 adequately funds Navy Medicine to meet its medical mission for the Navy and Marine Corps. We recognize the significant investments made in supporting military medicine and remain committed to providing outstanding care to all our beneficiaries. Moving forward, we must innovate, position our direct care system to recapture private sector care, and deliver best value to our patients. Driving these changes is critical and necessary but not sufficient. The Secretary of Defense has articulated that the current upward trajectory of healthcare spending within the Department is not sustainable. Accordingly, the President's budget includes important healthcare proposals designed to address this situation, including adjustments in TRICARE fees. The Department of Navy supports these proposals and believes they are important for ensuring a sustainable and equitable benefit for all our beneficiaries. We deliver one of the most comprehensive health benefits available and these changes will help us better manage costs, provide quality, accessible care, and keep faith with our beneficiaries. As the Navy Surgeon General, I appreciate the tremendous commitment of our senior leaders in this critical area and share the imperative of controlling costs and maintaining an affordable and sustainable benefit.

Value—a key analytic in our decisionmaking—must inherently address cost and quality as we implement efficiencies and streamline operations. All of us in the Military Health System (MHS) recognize the challenges ahead are significant, including rising healthcare costs, increased number of beneficiaries, and maintaining long-term care responsibilities for our medically retired warriors.

Additionally, we are very focused on improving internal controls and financial procedures in response to congressional priorities to obtain a clean financial audit. We have mandated the use of standard operating procedures at all our activities for

those business processes which impact financial transactions. I have also emphasized the responsibility of every commanding officer in setting and maintaining appropriate internal controls. We are regularly evaluating our progress through financial transactions and process reviews which help us identify if any changes need to be made. We are making progress and our leadership is fully engaged and leaning forward to ensure the best possible stewardship of our resources.

Alignment is also critical as we focus on more joint solutions within the MHS and in conjunction with the Army and Air Force. We see tremendous progress in joint medical operations, from battlefield medicine to education and training to research and development. As we continue to synchronize our collective efforts through deliberative planning and rigorous analyses, I believe we will have more opportunities to create synergies, reduce redundancies, and enhance value across the MHS.

Our continuing joint efforts in the integration of the Quadruple Aim initiative is helping to develop better outcomes and implement balanced incentives across the MHS. The Quadruple Aim applies the framework from the Institute for Healthcare Improvement (IHI) and customizes it for the unique demands of military medicine. It targets the MHS and services' efforts on integral outcomes in the areas of readiness, population health and quality, patient experience, and cost. Our planning process within Navy Medicine is complementary to these efforts and targets goals that measure our progress and drive change through constructive self-assessment. I have challenged Navy Medicine leaders at headquarters, operational and regional commands, and treatment facilities to maintain strategic focus on these key metrics.

## OUR MISSION IS FORCE HEALTH PROTECTION

Force Health Protection is at the epicenter of everything we do. It is an expression of our Core Values of Honor, Courage, and Commitment and the imperative for our worldwide engagement in support of expeditionary medical operations and combat casualty care. It is at the very foundation of our continuum of care in support of the warfighter and optimizes our ability to promote, protect, and restore their health. It is both an honor and obligation.

Our Force Health Protection mission is clearly evident in our continued combat casualty care mission in Operation Enduring Freedom (OEF). Navy Medicine personnel are providing direct medical support to the operating forces throughout the area of responsibility (AOR). We continue to see remarkable advances in all aspects of life-saving trauma care. These changes have been dramatic over the last decade and enabled us to save lives at an unprecedented rate. We are continuously implementing lessons learned and best clinical practices, ensuring our providers have the most effective equipment available, and focusing on providing realistic and meaningful training. Mission readiness means providing better, faster combat casualty care to our warfighters.

The North Atlantic Treaty Organization (NATO) Role 3 Multinational Medical Unit (MMU), operating at Kandahar Airfield, Afghanistan is a world-class combat trauma hospital that serves a unique population of United States and coalition forces, as well as Afghan National Army, National Police, and civilians wounded in Afghanistan. Led by Navy Medicine, the Role 3 MMU is an impressive 70,000 square foot state-of-the-art facility that is the primary trauma receiving and referral center for all combat casualties in Southern Afghanistan. It has 12 trauma bays, 4 operating rooms, 12 intensive care beds, and 35 intermediate care beds. The approximately 250 staff of Active component (AC) and Reserve component (RC) personnel includes 30 physicians with multiple surgical specialties as well as anesthesia, emergency medicine, and internal medicine. RC personnel currently make up 27 percent of overall manning and provide us unique and invaluable skill sets. With trauma admissions averaging 175 patients per month, the unit achieved unprecedented survival rates in 2011. In addition, MMU has two forward surgical teams deployed in the region to provide frontline surgical trauma care demonstrating agility to meet changing operational requirements.

Training is critical for our personnel deploying to the MMU Role 3. This year, we established a targeted training program at the Naval Expeditionary Medical Training Institute (NEMTI) onboard Marine Corps Base Camp Pendleton for our personnel deploying to the MMU. The training is part of an effort designed to foster teamwork, and build medical skills specific to what personnel require while on a 6-month deployment. Navy Medicine and U.S. Fleet Forces Command (FFC) recognized the need to integrate medical training scenarios to expand upon the knowledge and skills required to fill positions at the Kandahar Role 3 facility. In January, I had the opportunity to see this impressive training in action during the course's final exercise and saw our personnel implement the clinical skills they honed during the 2-week course. They participated in a scenario-driven series of exercises, includ-

ing staffing a fully equipped hospital receiving patients with traumatic injuries, simulated air strike, and a mass casualty drill. This training, as well as the program at the Navy Trauma Training Center (NTTC) at Los Angeles County/University of Southern California Medical Center where our personnel train as teams in a busy civilian trauma center, help ensure our deployers have the skills and confidence to succeed in their combat casualty care mission.

Recognizing the importance of ensuring our deployed clinicians have access to state-of-the-art capabilities, Navy Medicine, in conjunction with the Army, Air Force, and our contracted partners worked successfully to deliver the first ever magnetic resonance imaging (MRI) technology in a combat theatre to aid the comprehensive diagnosis and treatment of concussive injuries. Efforts included the planning, design, and execution of this new capability as well as ensuring that clinical, logistical, transportation, environmental, and sustainment considerations for the MRIs were fully addressed prior to the deployment of the units to the battlefield. The fact that we were able to design, acquire, and deliver this new capability to the battlefield in approximately 6 months from contract award is a testament to the commitment of the joint medical and logistics teams. MRIs are now in place Role 3 MMU in Kandahar, Role 3 Trauma Hospital in Camp Bastion and the Joint Theatre Hospital located on Bagram Airfield.

Navy Medicine also supports stability operations through multiple types of engagements including enduring, ship-centric humanitarian assistance (HA) missions such as Pacific Partnership and Continuing Promise, which foster relationships with partner countries. During 2011 Pacific Partnership 2011, 86 Navy Medicine personnel augmented with nongovernmental organization, interagency, and other Service personnel conducted activities in Tonga, Vanuatu, Papua New Guinea, Timor Leste, and the Federated States of Micronesia. Engagements included engineering projects, veterinary services, preventive medicine/public health, and biomedical equipment repair. Continuing Promise 2011 involved 480 Navy Medicine personnel conducting activities in Jamaica, Peru, Ecuador, Colombia, Nicaragua, Guatemala, El Salvador, Costa Rica, and Haiti. More than 67,000 patients were treated and 1,130 surgeries were performed during this important mission. In addition to our efforts at sea, Navy Medicine also supports land-based HA engagements including Marine Corps exercises such as Africa Partnership Station and Southern Partnership Station as well as multiple Joint exercises such as Balikatan in the Philippines.

MEDICAL HOME PORT: PATIENT- AND FAMILY-CENTERED CARE

We completed our initial deployment of Medical Home Port (MHP) throughout the Navy Medicine enterprise. MHP is Navy Medicine's adaptation of the successful civilian patient-centered medical home (PCMH) concept of care which transforms the delivery of primary care to an integrated and comprehensive suite of services. MHP is founded in ensuring that patients see their assigned provider as often as possible, and that they can access primary care easily rather than seeking primary care in the emergency room. Strategically, MHP is a commitment to total health and, operationally, it is foundational to revitalizing our primary care system and achieving high-quality, accessible, cost-efficient healthcare for our beneficiaries.

We are also working with the Marine Corps to implement the Marine-centered medical home (MCMH) as a complementary analogue to the MHP. Likewise, we are working with U.S. Fleet Forces Command to establish a fleet-based model of the PCMH using the same principles. The first prototype carrier-based PCMH concept will be developed for USS *Abraham Lincoln* (CVN–72).

Initial results are encouraging. MHP performance pilots at the Walter Reed National Military Medical Center (WRNMMC) and Naval Hospital Pensacola have shown improvement in key healthcare outcomes such as:

—increased patient satisfaction;

—improved access to care; and

—improved quality of care associated with decreased use of the emergency room (an important cost driver).

Data show similar results enterprise-wide through October 2011, and also indicate improved continuity with assigned provider, decreased emergency room utilization, and better cost containment when compared with fiscal year 2010.

HEALING IN BODY, MIND, AND SPIRIT

Health is not simply the absence of infirmity or disease—it is the complete state of physical, mental, spiritual, and social well-being. As our wounded warriors return from combat and begin the healing process, they deserve a seamless and comprehensive approach to their recovery. Our focus is integrative, complementary, and multidisciplinary-based care, bringing together clinical specialists, behavioral health pro-

viders, case managers, and chaplains. There are approximately 170 medical case managers who work closely with their line counterparts in the Marine Corps' Wounded Warrior Regiment and the Navy's Safe Harbor program to support the full-spectrum recovery process for sailors, marines, and their families.

We have made remarkable progress in ensuring our wounded servicemembers get the care they need—from medical evacuation through inpatient care, outpatient rehabilitation to eventual return to duty or transition from the military. With our historically unprecedented battlefield survival rate, we witness our heroes returning with the life-altering wounds of war which require recovery and long-term care. We must continue to adapt our capabilities to best treat these conditions and leverage our systems to best support recovery.

To that end, we are committed to connecting our wounded warriors to approved emerging and advanced diagnostic and therapeutic options within our military treatment facilities (MTFs) and outside of military medicine. We do this through collaborations with major centers of reconstructive and regenerative medicine while ensuring full compliance with applicable patient safety policies and practices. The Naval Medical Research and Development Center in Frederick, Maryland, is aggressively engaged in furthering support for cooperative medical research between multiple centers of regenerative and reconstructive medicine. Their collaborative efforts, in conjunction with the Armed Forces Institute of Regenerative Medicine (AFIRM), are essential in developing new regenerative and transplant capabilities, both at the civilian and the military institutions with ultimate sharing of knowledge, expertise, and technical skills in support of restoration of our wounded warriors.

Navy Medicine continues a robust translation research program in wound healing and wound care, moving technologies developed at the bench to deployment in the clinic to enhance the care of the wounded warfighter. Concurrently, we are focused on improving the capability and capacity to provide comprehensive and interdisciplinary pain management from the operational setting to the MTF to home. This priority includes pain management education and training to providers, patients, and families to prevent over-prescribing, misuse of medications, and promoting alternative therapies.

Preserving the psychological health of servicemembers and their families is one of the greatest challenges we face today. The Navy continues to foster a culture of support for psychological health as an essential component to total force fitness and readiness. Navy and Marine Corps combat operational stress control (COSC) programs provide sailors, marines, leaders, and families the skills and resources to build resiliency. We also continue to address stigma by encouraging prevention, early intervention, and help-seeking behaviors. Training is designed to build teams of leaders, marines, sailors, medical, and religious ministry personnel to act as sensors for leadership by noticing small changes in behavior and taking action early. These efforts support in fostering unit strength, resilience, and readiness.

Navy Medicine has continued to adapt psychological health support across traditional and nontraditional healthcare systems. Access to psychological health services have increased in venues designed to reduce the effects associated with mental health stigma. These efforts are also focused on suicide prevention and are designed to improve education, outreach, and intervention. In 2011, more than 1,000 health providers received targeted training in assessing and managing suicide risk. We are also integrating behavioral health providers in our MHP program to help address the needs of our patients in the primary care setting.

Post-traumatic stress disorder (PTSD) is one of many psychological health conditions that adversely impacts operational readiness and quality of life. Navy Medicine has an umbrella of psychological health programs that target multiple, often co-occurring, mental health conditions including PTSD. These programs support prevention, diagnosis, mitigation, treatment, and rehabilitation of PTSD. Our efforts are also focused on appropriate staffing, meeting access standards, implementing recommended and standardized evidence-based practices, as well as reducing stigma and barriers to care.

We recently deployed our fifth Navy Mobile Mental Health Care Team (MCT) in Afghanistan. Consisting of two mental health clinicians, a research psychologist and an enlisted behavioral health technician, their primary mission is to administer the Behavioral Health Needs Assessment Survey (BHNAS). The results give an overall assessment and actionable intelligence of real-time mental health and well-being data for our deployed forces. It can also identify potential areas or subgroups of concern for leaders on the ground and those back in garrison. The survey assesses mental health outcomes, as well as the risk and protective factors for those outcomes such as combat exposures, deployment-related stressors, positive effects of deployment, leadership perceptions, and morale and unit cohesion. The MCT also has a preventive mental health and psycho-education role and provides training in COSC

and combat and operational stress first aid (COSFA) to sailors in groups and individually to give them a framework to mitigate acute stressors and promote resilience in one another.

Data from previous MCT deployments and BHNAS analyses indicate continued need for implementation of COSC doctrine and command support in OEF. In addition, the Joint Mental Health Assessment Team (J–MHAT 7) surveillance efforts conducted in Afghanistan during 2010 indicate an increase in the rate of marines screening at-risk for PTSD relative to similar surveys conducted in marine samples serving in Iraq during 2006 and 2007. This assessment also shows increases in training effectiveness regarding managing combat deployment stress, as well as a significant reduction in stigma associated with seeking behavioral health treatment.

In collaboration with the Marine Corps, the operational stress control and readiness (OSCAR) program represents an approach to mental healthcare in the operational setting by taking mental health providers out of the clinic and embedding them with operational forces to emphasize prevention, early detection, and brief intervention. OSCAR-trained primary care providers recognize and treat psychological health issues at points where interventions are often most effective. In addition, OSCAR includes chaplains and religious personnel (OSCAR Extenders) who are trained to recognize stress illness and injuries and make appropriate referral. More than 3,000 marine leaders and individual marines have been trained in prevention, early detection, and intervention in combat stress through OSCAR Team Training and will operate in OSCAR teams within individual units.

Through the caregiver occupational stress control (CgOSC) program, Navy Medicine is also working to enhance the resilience of caregivers to the psychological demands of exposure to trauma, wear and tear, loss, and inner conflict associated with providing clinical care and counseling. The core objectives include:

—early recognition of distress;

—breaking the code of silence related to stress reactions and injuries; and

—engaging caregivers in early help as needed to maintain both mission and personal readiness.

Our emphasis remains ensuring that we have the proper size and mix of mental health providers to care for the growing need of servicemembers and their families who need care. Within Navy Medicine, mental health professional recruiting and retention remains a top priority. Although shortfalls remain, we have made progress recruiting military, civilian, and contractor providers, including psychiatrists, clinical psychologists, social workers, and mental health nurse practitioners. We have increased the size of the mental health workforce in these specialties from 505 in fiscal year 2006 to 829 in fiscal year 2012. Notwithstanding the military is not immune to the nationwide shortage of qualified mental health professionals. Throughout the country, the demand for behavioral health services remains significant and continues to grow.

Caring for our sailors and marines suffering with traumatic brain injury (TBI) remains a top priority. While we are making progress, we have much work ahead of us as we determine both the acute and long-term impact of TBI on our servicemembers. Our strategy must be both collaborative and inclusive by actively partnering with the other Services, our Centers of Excellence, the Department of Veterans Affairs (VA), and leading academic medical and research centers to make the best care available to our warriors afflicted with TBI.

Navy Medicine is committed to ensuring thorough screening for all sailors and marines prior to deployment, while in theatre, and upon return from deployment. Pre-deployment neurocognitive testing is mandated using the Automated Neuropsychological Assessment Metrics (ANAM). The ANAM provides a measure of cognitive performance, that when used with a patient with confirmed concussion, can help a provider determine functional level as compared to the servicemember's baseline. In-theatre screening, using clinical algorithms and the Military Acute Concussion Evaluation (MACE), occurs for those who have been exposed to a potentially concussive event, as specified by the event driven protocols of the TBI Directive-type Memorandum (DTM) 09–033 released in June 2010.

DTM–09–033 has changed the way we treat TBI in theatre. It requires pre-deployment on point-of-injury care, improved documentation, and tracking of concussion by line and medical leaders, as well as a move toward standardization of system-wide care.

In-theatre, the Concussion Restoration Care Center (CRCC) at Camp Leatherneck Afghanistan, became operational in August 2010. CRCC represents a ground-breaking, interdisciplinary approach to comprehensive musculoskeletal and concussion care in the deployed setting. As of December 1, 2011, the CRCC has seen more than 2,500 patients (more than 750 with concussion) with a greater than 95 percent return to duty rate. I am encouraged by the impact the CRCC is having in theatre

by providing treatment to our servicemembers close to the point-of-injury and returning them to duty upon recovery. We will continue to focus our attention on positioning our personnel and resources where they are most needed.

Postdeployment surveillance is accomplished through the postdeployment health assessment (PDHA) and postdeployment health reassessment (PDHRA), required for returning deployers. Navy Medicine has conducted additional postdeployment TBI surveillance on high-risk units and those marines with confirmed concussions in theatre, with a goal of improving patient outcomes and better informing leaders.

Access and quality of care for treating TBIs are being addressed through standardization of Navy Medicine's current six clinical TBI specialty programs at Naval Medical Center Portsmouth, Naval Medical Center San Diego, Naval Hospital Camp Lejeune, Naval Hospital Camp Pendleton, Naval Health Clinic New England—Branch Health Clinics Groton and Portsmouth. Additionally, we have an inpatient program at WRNMMC which focuses on moderate and severe TBI while also conducting screening for TBI on all polytrauma patients within the medical center.

The National Intrepid Center of Excellence (NICoE) is dedicated to providing cutting-edge evaluation, treatment planning, research, and education for servicemembers and their families dealing with the complex interactions of mild TBI and psychological health conditions. Their approach is interdisciplinary, holistic, patient-, and family-centered. The NICoE's primary patient population is comprised of Active Duty servicemembers with TBI and PH conditions who are not responding to current therapy. The NICoE has spearheaded partnerships with many military, Federal, academic, and private industry partners in research and education initiatives to further the science and understanding of these invisible wounds of war. The Department of Defense (DOD) has recently accepted an offer from the Intrepid Fallen Heroes Fund to construct several NICoE Satellite centers to treat our military personnel suffering from PTSD or TBI locally. The first installations to receive these centers will be Fort Belvoir, Camp Lejeune, and Fort Campbell. The Services are actively working together to determine the details regarding project timelines, building sizes, staffing, funding, and sustainability.

We need to continue to leverage the work being done by the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, including the Defense and Veterans Brain Injury Center, given their key roles in the expanding our knowledge of PH and TBI within the MHS, the VA and research institutions. This collaboration is also evident in the work being conducted by the Vision Center of Excellence (VCE), established by the National Defense Authorization Act of 2008. VCE, for which Navy Medicine currently provides operational support, exemplifies this important symmetry with military medicine, the VA and research partners. They are developing a distributed and integrated organization with regional locations that link together a network of clinical, research, and teaching centers around the world. The VCE encompasses an array of national and international strategic partners, including institutions of higher learning, and public and private entities.

Family readiness supports force readiness so we must have programs of support in place for our families. We continue to see solid results from FOCUS (Families Over Coming Under Stress), our evidence-based, family-centered resilience training program that enhances understanding of combat and operational stress, psychological health and developmental outcomes for highly stressed children and families. Services are offered at 23 CONUS/OCONUS locations. As of December 2011, 270,000 families, servicemembers, and community support members have been trained on FOCUS. Based on the program's annual report released in July 2011, we can see there has been a statistically significant decrease in issues such as depression and anxiety in servicemembers, spouses, and children who have completed the program as well as a statistically significant increase in positive family functioning for families.

For our Marine Corps and Navy Reserve populations, we have developed the Reserve Psychological Health Outreach Program (PHOP). PHOP provides psychological health outreach, education/training, and resources a 24/7 information line for unit leaders or reservists and their families to obtain information about local resources for issues related to employment, finances, psychological health, family support, and child care. PHOP now includes 55 licensed mental health providers dispersed throughout the country serving on 11 teams located centrally to Navy and Marine Force Reserve commands.

Returning warrior workshops (RWWs) began with the Navy Reserve more than 5 years ago and are conducted quarterly in each Navy Reserve Region across the country. As of September 2011, more than 10,000 servicemembers and their families have participated in RWWs. RWWs assist demobilized servicemembers and their loved ones in identifying immediate and potential issues that often arise during postdeployment reintegration.

Navy Medicine maintains a steadfast commitment to our substance abuse rehabilitation programs (SARPs). SARPs offer a broad range of services to include alcohol education, outpatient and intensive outpatient treatment, residential treatment, and medically managed care for withdrawal and/or other medical complications. We have expanded our existing care continuum to include cutting-edge residential and intensive outpatient programs that address both substance abuse and other co-occurring mental disorders directed at the complex needs of returning warriors who may suffer from substance abuse disorders and depression or PTSD. In addition, Navy Medicine has developed a new program known as My Online Recovery Experience (MORE). In conjunction with Hazelden, a civilian leader in substance abuse treatment and education, MORE is a ground-breaking Web-based recovery management program available to servicemembers 24/7 from anywhere in the world. Navy Medicine has also invested in important training opportunities on short-term interventions and dual diagnosis treatment for providers and drug and alcohol counselors, markedly improving quality and access to care.

Our Naval Center for Combat & Operational Stress Control (NCCOSC)—now in its fourth year—continues to improve the psychological health of marines and sailors through comprehensive programs that educate servicemembers, build psychological resilience and promote best practices in the treatment of stress injuries. The overarching goal is to show sailors and marines how to recognize signs of stress before anyone is in crisis and to get help when it is needed. NCCOSC continues to make progress in advancing research for the prevention, diagnosis, and treatment of combat and operational stress injuries, including PTSD. They have 50 on-going scientific projects and have doubled the number of enrolled participants from a year ago to more than 7,100. Similarly, they have expanded the enrollment in their psychological health pathways (PHP) pilot project to 2,248 patients—a 38-percent increase over last year.

FORCE MULTIPLIERS: RESEARCH AND DEVELOPMENT AND GRADUATE MEDICAL EDUCATION

Innovative research and development and vibrant medical education help ensure that we have the capabilities to deliver world-class care now and in the future. They are sound investments in sustaining our excellence to Navy Medicine to our mission of Force Health Protection.

The continuing mission of our Medical Research and Development program is to conduct health and medical research in the full spectrum of development, testing, clinical evaluation (RDT&E), and health threat detection in support of the operational readiness and performance of DOD personnel worldwide. In parallel with this primary operational research activity, our clinical investigation program (CIP) continues to expand at our teaching MTFs with direct funding being provided to support the enrichment of knowledge and capability of our trainees. Where consistent with this goal, these programs are participating in the translation of knowledge and tangible products from our RDT&E activity into proof of concept and cutting edge interventions that are directly applied in benefit of our wounded warriors and our beneficiaries.

Navy Medicine's five strategic research priorities are set to meet the war-fighting requirements of the Chief of Naval Operations and the Commandant of the Marine Corps. These pursuits continue with appropriate review and the application of best practices in meeting our goals. These five areas of priority include:

—TBI and psychological health treatment and fitness;
—medical systems support for maritime and expeditionary operations;
—wound management throughout the continuum of care;
—hearing restoration and protection for operational maritime surface and air support personnel; and
—undersea medicine, diving, and submarine medicine.

We continue to strengthen our medical partnerships in Southeast Asia, Africa, and South America through the cooperation and support provided by our Naval Medical Research Units and medical research operations in those geographical regions. We find that the application of medical and healthcare diplomacy is a firm cornerstone of successful pursuit of overarching bilateral relations between allies. These engagements are mutually beneficial—not only for the relationships with Armed Forces of engaged countries but for generalization of healthcare advances to the benefit of peoples around the globe.

Graduate Medical Education (GME) is vital to the Navy's ability to train board-certified physicians and meet the requirement to maintain a tactically proficient, combat-credible medical force. Robust, innovative GME programs continue to be the

hallmark of Navy Medicine. We are pleased to report that despite the challenges presented by 10 years of war, GME remains strong.

Our institutions and training programs continue to perform well on periodic site visits by the Accreditation Council for Graduate Medical Education (ACGME) and most are at or near the maximum accreditation cycle length. The performance of our three major teaching hospitals, in particular, has been outstanding with all three earning the maximum 5-year accreditation cycle length. Board certification is another hallmark of strong GME. The overall pass rate for Navy trainees in 2011 was 96 percent, well-above the national average in most specialties. Our Navy-trained physicians continue to prove themselves exceptionally well-prepared to provide care to all members of the military family, and in all operational settings ranging from the field hospitals of the battlefield to the platforms that support disaster and humanitarian relief missions.

Overall, I am pleased with the progress we are making with our joint enlisted training efforts at the Medical Education and Training Campus (METC) in San Antonio, Texas. I had an opportunity to visit the training center earlier this year and meet with the leadership and students. We have a tremendous opportunity to train our sailors with their Army and Air Force counterparts in a joint environment, and I am working with my fellow Surgeons General to ensure we optimize our efforts, improve interoperability and create synergies.

## INTEROPERABILITY AND COLLABORATIVE ENGAGEMENT

Navy Medicine continues to leverage its unique relationships with the Army, Air Force, the VA, as well as other Federal and civilian partners. This interoperability helps create system-wide synergies and foster best practices in care, education and training, research and technology.

Our sharing and collaboration efforts with the VA continue throughout our enterprise and Navy Medicine's most recent joint venture is a unique partnership between the Naval Health Clinic Charleston, Ralph H. Johnson Veterans Affairs Medical Center, Naval Hospital Beaufort and the Air Force's 628th Medical Group. This partnership will manage joint healthcare services and explore local joint opportunities for collaboration. In addition, our new replacement facility at Naval Hospital Guam, currently under construction, will continue to provide ancillary and specialty service to VA beneficiaries.

Operations continue at the Captain James A. Lovell Federal Health Care Center (FHCC) in Great Lakes, Illinois—a first-of-its-kind fully integrated partnership that links Naval Health Clinic Great Lakes and the North Chicago VA Medical Center into one healthcare system. This joint facility, activated in October 2010, is a 5-year demonstration project as mandated by the National Defense Authorization Act of Fiscal Year 2010. During its first year, FHCC successfully completed the Civilian Personnel Transfer of Function which realigned staff from 1,500 to more than 3,000. The USS *Red Rover* Recruit Clinic processed more than 38,000 U.S. Navy recruits and delivered more than 178,000 immunizations to the Navy recruits. We continue to work with DOD and the VA to leverage the full suites of information technology capabilities to support the mission and patient population.

In addition, our collaborative efforts are critical in continuing to streamline the integrated disability evaluation system (IDES) in support of our transitioning wounded, ill, and injured servicemembers. Within the Department of Navy (DON), we have completed IDES expansion to all 21 CONUS MTFs and we are working to implement improvements and best practices in order to streamline the IDES process to allow for timely and thorough evaluation and disposition. Further collaboration between DOD, the Services, and the VA regarding information technology improvements, ability for field-level reports for case management and capability for electronic case file transfer is ongoing.

In support of DOD and VA interagency efforts, we are leveraging our information technology capabilities and building on joint priorities to support a seamless transition of medical information for our servicemembers and veterans. This ongoing work includes the development of an integrated electronic health record and the virtual lifetime electronic record (VLER), including the Naval Medical Centers San Diego and Portsmouth participation in VLER pilot projects.

We completed the requirements associated with the base realignment and closure (BRAC) in the National Capital Region (NCR) with the opening of the Walter Reed National Military Medical Center and Fort Belvoir Community Hospital. The scope of this realignment was significant, and we are continuing to devote attention to ensuring that our integration efforts reduce overhead, maintain mission readiness, and establish efficient systems for those providing care to our patients. We have outstanding staff members comprised of Navy, Army, Air Force and civilians, who are

executing their mission with skill, compassion, and professionalism. The opening of these impressive facilities represented several years of hard work by the men and women of military medicine, as well as generous support from Members of Congress. I am proud of what we accomplished and, moving forward, encouraged about the opportunities for developing a sustainable, efficient integrated healthcare delivery model in the NCR. I, along with my fellow Surgeons General, am committed to this goal and recognize the hard work ahead of us.

PEOPLE—OUR MOST IMPORTANT ASSET

The hallmark of Navy Medicine is our professional and dedicated workforce. Our team consists of more than 63,000 Active component (AC) and Reserve component (RC) personnel, government civilians as well as contract personnel—all working around the world to provide outstanding healthcare and support services to our beneficiaries. I am continually inspired by their selfless service and sharp focus on protecting the health of sailors, marines, and their families.

Healthcare accessions and recruiting remain a top priority, and, overall, Navy Medicine continues to see solid results from these efforts. Attainment of our recruiting and retention goals has allowed Navy Medicine to meet all operational missions despite some critical wartime specialty shortages. In fiscal year 2011, Navy Recruiting attained 101 percent of Active Medical Department officer goals, and 85 percent of Reserve Medical Department officer goals. In a collaborative effort with the Chief of Navy Reserve and Commander, Navy Recruiting Command, we are working to overcome challenges in the RC medical recruiting missions. We recently held a recruiting medical stakeholders conference during which we discussed the challenges and courses of action to address them. Using a variety of initiatives such as the Health Professions Scholarship Program (HPSP), special incentive pays and selective re-enlistment bonuses, Navy Medicine is able to support and sustain accessions and retention across the Corps. We are grateful to the Congress for the authorities provided to us in support of these programs.

As a whole, AC Medical Corps manning at the end of fiscal year 2011 was 100 percent of requirements; however, some specialty shortfalls persist including general surgery, family medicine, and psychiatry. Aggressive plans to improve specialty shortfalls include continuation of retention incentives via special pays, and an increase in psychiatry training billets. Overall AC Dental Corps manning was at 96 percent of requirements, despite oral and maxillofacial surgeons manning at 77 percent. A recent increase in incentive special pays was approved to address this shortfall. General dentist incentive pay and retention bonuses have helped increase general dentist manning to 99 percent, up from 88 percent manning a year ago. At the end of fiscal year 2011, AC Medical Service Corps manning was 94 percent of requirements. A staffing shortage does exist for the social work specialty, manned at 45 percent. This shortage is due to increased requirements and billet growth during the past 3 years. We anticipate that this specialty will be fully manned by the end fiscal year 2014 through increased accessions and incentive programs. Our AC Nurse Corps manning at the end of fiscal year 2011 was 94 percent of requirements. Undermanned low-density/high-demand specialties including peri-operative nurses, certified registered nurse anesthetists and critical care nurses are being addressed via incentive special pays.

Our AC Hospital Corps remains strong with manning at 96 percent. Critical manning shortfalls exist in several skill sets such as behavioral health technicians, surface force independent duty corpsmen, dive independent duty corpsmen, submarine independent duty corpsmen, and reconnaissance corpsmen. Program accession and retention issues are being addressed through increased special duty assignment pay, selective re-enlistment bonuses and new force shaping policies.

Reserve component Medical Corps recruiting continues to be our greatest challenge. Higher AC retention rates have resulted in a smaller pool of medical professionals leaving Active Duty, and consequently, greater reliance on highly competitive Direct Commission Officer (DCO) market. RC Medical Corps manning at the end of fiscal year 2011 manning was at 71 percent of requirements while our Nurse Corps RC manning was 88 percent. To help mitigate this situation, there is an affiliation bonus of $10,000 or special pay of up to $25,000 per year based on specialty, and activated reserves are also authorized annual special incentive pays as applicable. Due to robust recruiting efforts and initiatives, the Reserve component Nurse Corps exceeded recruiting goals for the second consecutive year. Dental Corps and Medical Service Corps RC manning is 100 and 99 percent, respectively.

Overall RC Hospital Corps manning is at 99 percent; however, we do have some shortfalls in surgical, xray, and biomedical repair technicians. Affiliation bonuses are specifically targeted toward those undermanned specialties.

We are encouraged by our improving overall recruiting and retention rates. Improvements in special pays have mitigated manning shortfalls; however, it will take several years until Navy Medicine is fully manned in several critical areas. To ensure the future success of accession and retention for Medical Department officers continued funding is needed for our programs and special incentive pays. We are grateful for your support in this key area.

For our Federal civilian personnel within Navy Medicine, we have successfully transitioned out of the National Security Personnel System (NSPS) and, in conjunction with the Assistant Secretary of Defense for Health Affairs and the other Services, we have begun a phased transition to introduce pay flexibilities in 32 healthcare occupations to ensure pay parity among healthcare providers in Federal service. The initial phase occurred in fiscal year 2011 when more than 400 Federal civilian physicians and dentists were converted to the new Defense Physician and Dentist Pay Plan. Modeled on the current VA pay system, the Defense Physician and Dentist Pay Plan provides us with the flexibility to respond to local conditions in the healthcare markets. We continue to successfully hire required civilians to support our sailors and marines and their families—many of whom directly support our wounded warriors. Our success is largely attributed to the hiring and compensation flexibilities granted by the Congress to the DOD's civilian healthcare community over the past several years.

The Navy Medicine Reintegrate, Educate and Advance Combatants in Healthcare (REACH) program is an initiative that provides wounded warriors with career and educational guidance from career coaches, as well as hands-on training and mentoring from our hospital staff. To date, Navy Medicine has launched the REACH program at WRNMMC, Naval Medical Centers Portsmouth and San Diego, as well as Naval Hospital Camp LeJeune. The ultimate goal of the REACH program is to provide a career development and succession pipeline of trained disabled veterans for Federal Civil Service positions in Navy Medicine.

I am committed to building and sustaining diversity within the Navy Medicine workforce. Our focus remains creating an environment where our diversity reflects that of our patients and our Nation and where our members see themselves represented in all levels of leadership. We embrace what we learn from our unique differences with the goal of a work-life in balance with mind, body, and spirit. I believe we are more mission-ready, stronger, and better shipmates because of our diversity. Navy Medicine will continue to harness the teamwork, talent, and innovation of our diverse force as we move forward into our future.

CONCLUSION

In summary, Navy Medicine is an agile and vibrant healthcare team. I am grateful to those came before us for their vision and foresight; I am inspired by those who serve with us now for commitment and bravery; and I am confident in those who will follow us because they will surely build on the strength and tradition of Navy Medicine. I have never been more proud of the men and women of Navy Medicine.

On behalf of the men and women of Navy Medicine, I want to thank the subcommittee for your tremendous support, confidence, and leadership. It has been my pleasure to testify before you today and I look forward to your questions.

Chairman INOUYE. Thank you very much, Admiral.

General Horoho.

**STATEMENT OF LIEUTENANT GENERAL PATRICIA HOROHO, SURGEON GENERAL OF THE ARMY**

General HOROHO. Good morning, Chairman Inouye, Ranking Member Cochran, and distinguished members of the subcommittee. Thank you for providing me with this opportunity to share with you today my thoughts on the future of Army Medicine and highlight some of the incredible work that is being performed by the dedicated men and women with whom I'm honored to serve alongside.

We are America's most trusted premiere medical team, and our successful mission accomplishment over these past 10 years is testimony to the phenomenal resilience, dedication, and innovative spirit of the soldier medics, civilians, and family members through-

out the world. Since 1775, Army Medicine has been there. In every conflict, the United States has fought with the Army, Army Medicine has stood shoulder-to-shoulder with our fighting forces in the deployed environment, and receive them here at home when they returned.

It cannot be overstated that the best trauma care in the world resides with the United States military in Afghanistan, prosecuted by a joint healthcare team. Yet, we cannot have gone through 10 years of war for the length of time and not been aware of these experiences and how they've changed us as individuals, as an organization, and as a Nation.

The Army, at its core, is its people, not equipment or weapon systems. I'd like to thank the subcommittee for ensuring these brave men and women, who have endured so much over the past decade, have received a variety of programs, policies, and facilities to cope with the cumulative stress, the injuries, and the family separations caused by 10 years of war.

The warfighter does not stand alone. We must never forget that our success in Iraq and Afghanistan comes at a heavy price for our Army family. In supporting a nation in persistent conflict, with the stressors resulting from 10 years of war, Army Medicine has a responsibility to all those who serve, to include family members, our retirees, who have already answered the call to our Nation.

We hold sacred the enduring mission of providing support to the wounded warriors and their families. I would like to take a moment to acknowledge the warm embrace from communities across America, as our veterans transition back to civilian life.

While proudly acknowledging our many healthcare accomplishments at home and in theater, I want to turn to the future. The scope of Army Medicine extends beyond the outstanding in-theater combat care, and our mission is larger than the wartime medicine. We are an organization that has endured and excelled in global healthcare delivery, medical research and training programs, and collaborative partnerships. We are at our best when we operate as part of the joint team, and we need to proactively develop synergy with our partners as military medicine moves towards a joint operating environment. Continuity of care, continuity of information, and unity of effort are key not only to the current delivery of care as a DOD and VA team but also as we move forward in military medicine.

The current conflicts have shown the Nation and the world the incredible care that is provided by the joint team, and this unity of effort will continue to be key in facing future challenges. For example, we have partnered with the VA, the Defense and Veterans Brain Injury Center, and the Defense Center of Excellence for TBI and psychological health and academia, as well as the National Football League, to improve our ability to diagnose, treat, and care for those that are affected by TBI.

NEW CHALLENGES

Army Medicine has a history of changing to meet new challenges. We are looking at our culture and practices that focus on systems of care and transforming our enterprise from a healthcare system to a system for health. This transformation requires that we ex-

pand our focus beyond the treatment of illness and injury, and emphasize the importance of health, wellness, and prevention. In order for us to influence the health and wellness of our military members and families, we must engage with those entrusted to our care, so that we can influence their behaviors and impact their life space, where the daily decisions are made that ultimately have the greatest effect on health and wellness.

The Army Medicine team is committed to ensuring the right capabilities are available to promote health and wellness, support and sustain a medically ready force, and leverage innovation in order to remain a premiere healthcare organization. We are focused on decreasing variance, while increasing standards and furthering standardization across our organization.

The comprehensive behavioral health system is restoring the resiliency, resetting the formation, and re-establishing family and community bonds. We are strengthening our soldiers and family's behavior health and emotional resiliency through multiple touch points across a spectrum of time, from pre-deployment to redeployment, and into garrison life. We are committed to providing the continuity and standardized approach across the care continuum.

It is truly an honor to care for our military members and their families. We are advocates for those that are entrusted to our care, and Army Medicine team proudly serves our Nation's heroes with the respect and dignity that they have earned. In an increasingly uncertain world, we can state with certainty that Army Medicine is committed to providing the patient and family centric care. Every warfighter has a unique story, and we are dedicated to caring for each patient with compassion, respect, and dignity. This approach to medicine enhances the care, and we believe our patients deserve a care experience that embraces their desire to heal and have an optimal life.

I would like to close today by discussing the Army Medicine promise. The promise, a written covenant that will be in the hands of everyone entrusted to our care over the next year, tells those that we care for, the Army Medicine team believe they deserve from us. It articulates what we believe about the respect and dignity surrounding the patient care experience. The promise speaks to what we believe about the value of care we deliver, about the compassion contained in the care we deliver, and how we want to morally and ethically provide care for those that we serve.

I'll share two items with you of the promise. "We believe our patients deserve a voice in how Army Medicine cares for them, and all those entrusted to our care". Our patients want to harness innovation to improve and change their health, and we are empowering their efforts via the wellness centers. At our premiere wellness clinics, we collaborate with patients to not only give them the tools that they need to change their health but also a life-space partner to help them change their life.

Our wellness clinics are new and still evolving, but I'm committed to increasing their numbers and expanding their capabilities in order to dramatically impact those more than 500,000 minutes out of the year when our patients are living life outside the walls of our hospitals. The wellness clinics allow us to reach out to those we care for rather than having them reach in.

"We believe our patients deserve an enhanced care experience that includes our belief and their desire to heal, be well, and have an optimal life". We are committed to ensuring that we in Army Medicine live up to this promise.

PREPARED STATEMENT

In conclusion, I'm incredibly honored and proud to serve as the 43rd Surgeon General of the Army and Commander of the U.S. Medical Command. There are miracles happening every day in military medicine because of the dedicated soldiers and civilians that make up the Army Medical Department.

With the continued support of the Congress, we will lead the Nation in healthcare, and our men and women in uniform will be ready when the Nation calls them to action. Army Medicine stands ready to accomplish any task in support of our warfighters and military families. Army Medicine is serving to heal and truly honored to serve.

Thank you. And I look forward to entertaining your questions.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL PATRICIA D. HOROHO

INTRODUCTION

Chairman Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee: Thank you for providing me this opportunity to share with you today my thoughts on the future of the U.S. Army Medical Department (AMEDD) and highlight some of the incredible work being performed by the dedicated men and women with whom I am honored to serve alongside. We are America's most trusted premier medical team, and our successful mission accomplishment over these past 10 years is testimony to the phenomenal resilience, dedication, and innovative spirit of soldier medics, civilians, and military families throughout the world.

Since 1775, Army Medicine has been there. In every conflict the U.S. Army has fought, Army Medicine stood shoulder-to-shoulder with our fighting forces in the deployed environment and received them here at home when they returned. The past 10 years have presented the AMEDD with a myriad of challenges, encompassing support of a two-front war while simultaneously delivering healthcare to beneficiaries across the continuum. Our experiences in Iraq and Afghanistan have strengthened our capacity and our resolve as a healthcare organization. Army Medicine, both deployed and at home, civilian, and military, has worked countless hours to ensure the wellness of our fighting force and its families. Army Medicine continues to support in an era of persistent conflicts, and it is our top priority to provide comprehensive healthcare to support war-fighters and their families. The soldier is America's most sacred determinant of the Nation's force projection and the Army's most important resource; it is our duty to provide full-spectrum healthcare for our Nation's best. Committed to the health, wellness, and resilience of our force and its families, we will stand alongside and inspire confidence in our warriors when our Nation calls. Through the development of adaptive, innovative, and decisive leaders, we stand poised to support the foundation of our Nation's strength.

Over the past decade, Army Medicine has led the joint healthcare effort in the most austere environments. As part of the most decisive and capable land force in the world, we stand ready to adapt to the Army's reframing effort. Ten years of contingency operations have provided numerous lessons learned. We will use these as the foundations from which we deliver the Army's vision. The following focus areas are the pillars upon which we deliver on that effort.

SUPPORT THE FORCE

I was privileged to serve as the International Security Assistance Force Joint Command (COMIJC) Special Assistant for Health Affairs (SA–HA) from July–October 2011. My multidisciplinary team of 14 military health professionals conducted an extensive evaluation of theater health services support (HSS) to critically assess how well we were providing healthcare from point of injury to evacuation from theater. It cannot be overstated that the best trauma care in the world resides with

the U.S. military in Afghanistan and Iraq. From the most forward combat outposts to the modern Role 3 facilities on the mature forward operating bases, the performance and effectiveness of the U.S. military health system (MHS) is remarkable. The medical community holds the trust of the American servicemember sacred. The fact that servicemembers are willing to go out day-to-day and place themselves in harm's way in support of our freedom is strongly dependent on the notion that, if they become injured, we will be there providing the best medical care in the world. This has been proven time and time again with MEDEVAC remaining an enduring marker of excellence in the CJOA–A. The average mission time of 44 minutes is substantially below the 60-minute mission standard established by the Secretary of Defense in 2009. The survival rate for the conflict in Afghanistan is 90.1 percent. This ability to rapidly transport our wounded servicemembers coupled with the world-class trauma care delivered on the battlefield has resulted in achievement of the highest survival rate of all previous conflicts. The survival rate in World War II (WWII) was about 70 percent; in Korea and Vietnam, it rose to slightly more than 75 percent. In WWII, only 7 of 10 wounded troops survived; today more than 9 out of 10 do. Not only do 9 in 10 survive, but most are able to continue serving in the Army.

Enhanced combat medic training has without question, contributed to the increased survival rates on the battlefield by putting the best possible care far forward. The need for aerial evacuation of critical, often postsurgical patients, presented itself in Afghanistan based on the terrain, wide area dispersement of groundbased forces, as well as increased use of forward surgical teams. En route management of these patients required critical care experience not found organic to MEDEVAC. In response to these needs, our flight medic program (AD, NG, AR) is raising the standard to the EMT-Paramedic level to include critical care nursing once paramedic certified for all components. This will enhance our capabilities to match the civilian sector and make our flight medics even more combat ready for emergencies while on mission. We've just begun the first course that will pave the way with 28 flight medics coming from all components. By 2017, we will have all flight medics paramedic certified. In the area of standardization of enlisted medical competencies, we are ensuring that our medics are being utilized as force multipliers to ensure world-class healthcare in our facilities. We are working with our sister services to ensure that all medics, corpsmen, and medical technicians are working side-by-side in our joint facilities and training to the highest joint standard.

We have an enduring responsibility, alongside our sister services and the Department of Veterans Affairs (VA), to provide care and rehabilitation of wounded, ill, and injured servicemembers for many years to come. We will stand alongside the soldier from point of injury through rehabilitation and recovery, fostering a spirit of resiliency. The Warrior Care and Transition Program is the Army's enduring commitment to providing all wounded, ill, and injured soldiers and their families a patient-centered approach to care. Its goal is to empower them with dignity, respect, and the self-determination to successfully reintegrate either back into the force or into the community. Since the inception of warrior transition units in June 2007, more than 51,000 wounded, ill, or injured soldiers and their families have either progressed through or are being cared for by these dedicated caregivers and support personnel. Twenty-one thousand of these soldiers, the equivalent of two divisions, have been returned to the force, while another 20,000 have received the support, planning, and preparation necessary to successfully and confidently transition to civilian status. Today, we have 29 warrior transition units (WTUs) and 9 community-based warrior transition units (CBWTU). More than 9,600 soldiers are currently recovering in WTUs and CBWTU with more than 4,300 professional cadre supporting them. Standing behind these soldiers each stage of their recovery and transition is the triad of care (primary care manager, nurse case manager, and squad leader) and the interdisciplinary team of medical and nonmedical professionals who work with soldiers and their families to ensure that they receive the support they deserve.

The Army remains committed to supporting wounded, ill, or injured soldiers in their efforts to either return to the force or transition to Veteran status. To help soldiers set their personal goals for the future, the Army created a systematic approach called the Comprehensive Transition Plan, a multidisciplinary and automated process which enables every warrior-in-transition to develop an individualized plan, which will enable them to reach their personal goals. These end goals shape the warrior-in-transition's day-to-day work plan while healing.

For those soldiers who decide to transition to veteran status the Warrior Transition Command's (WTC) mission is to assist them to successfully reintegrate back into the community with dignity, respect, and self-determination. One example of how the WTC is working to better assist this group of soldiers is the WTC-sponsored, joint service Wounded Warrior Employment Conference (WWEC) held in Feb-

ruary. This is the second year the WWEC has brought together key stakeholders in the Federal Government and private industry. The goal is improved alliance and collaboration between military, civilian, Federal entities, and employers to encourage them to cooperatively support employment related objectives and share best practices in hiring, retaining, and promoting wounded warriors, recently separated disabled veterans, their spouses, and caregivers.

THE CARE EXPERIENCE

The warfighter does not stand alone. Army Medicine has a responsibility to all those who serve, to include family members and our retirees who have already answered the call to our Nation. We continue to fully engage our patients in all aspects of their healthcare experience. At each touch point, starting with the initial contact, each team member plays an important role in enhancing patient care. We will make the right care available at the right time, while demonstrating compassion to those we serve and value to our stakeholders. Beneficiaries will choose hospitals who give them not only outstanding outcomes but the best-possible experience. And we aim to elevate the patient care experience across the enterprise to make the direct care system the preferred location to receive care. I am proud to share today that our patient satisfaction rate is currently above 92 percent, and we are in the top 10 percent of health plans in the United States according to Healthcare Effectiveness and Data Information Set (HEDIS®), a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care. This said, my challenge—and my personal belief is that we can get better—we must be better. I'd like to outline a few areas where we continue to better ourselves in order to better the care experience for our patients.

Army Medicine is committed to accountable care—where our clinical processes facilitate best practice patterns and support our healthcare team in delivering competent, compassionate care. In everything we do, there is a need for accountability—to our patients, our team members, and ourselves. Accountability is not just providing competent delivery of healthcare; our warfighters deserve more than that. Accountability is about taking ownership of the product we create and how it is delivered, considering it a reflection of ourselves and the organization. At the end of the workday, accountability is not measured by relative value units, but by impact on patients. It is not about the final outcome, but about the process and upholding our commitment to soldiers and their families. Soldier well-being and health are absolutely our top priorities. The Army Medicine team will continue advocating for patients and their well-being. As an Army at war for more than a decade, we stand shoulder-to-shoulder with the warfighter, both on the battlefield and at home. This means never losing sight of the importance of caring for our Nation's heroes and their families. Realizing that this Army Medicine team is working around the clock and around the world to ensure soldiers and their families are cared for with compassion and dignity, I have asked our leaders to focus on caring for those who are giving care. The Army Medicine team is not immune to the stress of deployments, workload demands, and challenging circumstances. We provide the best care for our patients when we take care of each other. By doing that, we give our best to all those entrusted to our care.

Army Medicine has consciously committed to building a "culture of trust". Trust in patient care, trust within Army Medicine and the Army family. In healthcare, trust plays a critical and important role. This strategic initiative is focused on an organizational culture change within Army Medicine and creating a lifestyle of trust. A culture of trust in Army Medicine is a shared set of relationship skills, beliefs, and behaviors that distinguish our commitment to our beneficiaries to provide the highest quality and access to health services. Every initiative aimed at reducing variance and standardizing and improving patients' healthcare experiences, outcomes, and readiness will be founded on a culture of trust. Last fall the culture of trust task force began piloting the initial culture of trust training. This foundational training provides information on trust behaviors, tenets, and fundamentals creating a baseline upon which we will grow and expand.

We constantly seek to establish stronger, more positive relationships with all that we serve in Army Medicine, to produce the very best-possible individual care experience. To that end, Army Medicine has implemented a training program titled, "Begin with the Basics". The central theme of this training is individual personalized engagement practiced by each and every member of Army Medicine. Through these relationships we increase understanding and in understanding our patients better, we are able to provide better solutions. The goal is full deployment of the basics of this model across Army Medicine in the next 18 months. We are using this

model for care and service training as we deploy our medical home care model across Army Medicine.

In February 2011, Army Nursing began implementing a patient-centered outcomes focused care delivery system encompassing all care delivery environments; inpatient, outpatient, and deployed. The Patient Caring Touch System (PCTS) was designed to reduce clinical quality variance by adopting a set of internally and externally validated best practices. PCTS swept across Army Medicine, and the last facility completed implementation in January 2012. PCTS is a key enabler of Army Medicine's Culture of Trust and nests in all of Army Medicine's initiatives. PCTS is enhancing the quality of care delivery for America's sons and daughters. PCTS has improved communication and multidisciplinary collaboration and has created an increased demand and expanded use of multidisciplinary rounds. Several facilities have reported that bedside report, hourly rounding, and multidisciplinary rounding are so much a part of the routine that they cannot recall a time when it was not part of their communication process.

The collective healthcare experience is driven by a team of professionals, partnering with the patient, focused on health promotion, and disease prevention to enhance wellness. Essential to integrated healthcare delivery is a high-performing primary care provider/team that can effectively manage the delivery of seamless, well-coordinated care and serve as the patient's medical home. Much of the future of military medicine will be practiced at the patient-centered medical home (PCMH). We have made PCMHs and community-based medical homes a priority. The Army's 2011 investment in patient-centered care is $50 million. PCMH is a primary care model that is being adopted throughout the MHS and in many civilian practices throughout the Nation. Army PCMH is the foundation for the Army's transition from a "healthcare system to a system for health" that improves soldier readiness, family wellness and overall patient satisfaction through a collaborative team-based system of comprehensive care that is ultimately more efficient and cost effective. The PCMH will strengthen the provider-patient relationship by replacing episodic care with readily available care with one's personal clinician and care team emphasizing the continuous relationship while providing proactive, fully integrated and coordinated care focusing on the patient, his or her family, and their long-term health needs. The Army is transforming all of its 157 primary care practices to PCMH practices. A key component of transformation to the Army PCMH requires each practice to meet the rigorous standards established by the National Committee for Quality Assurance (NCQA). In December 2011, 17 Army practices received NCQA recognition as PCMHs, and I anticipate we will have 50 additional practices that will obtain NCQA recognition by the end of this calendar year. It is expected that all Army primary care clinics will be transformed to Army Medical Homes by fiscal year 2015. Transformation to the PCMH model should result in an increased capacity within Army military treatment facilities (MTFs) of more than 200,000 beneficiaries by fiscal year 2016. The Army has established Community Based Medical Homes to bring Army Medicine closer to our patients. These Army-operated clinics in leased facilities are in off-post communities closer to our beneficiaries and aim to improve access to healthcare services, including behavioral health, for Active-Duty family members by expanding capacity and extending the MTF services off post. Currently we are approved to open 21 clinics and are actively enrolling beneficiaries at 13 facilities.

## UNITY OF EFFORT

The ability to form mixed organizations at home and on the battlefield with all service and coalition partners contributing to a single mission of preserving life is proof of the flexibility and adaptability of America's medical warfighters. It is our collective effort—Army, Air Force, and Navy—that saves lives on the battlefield. It is an Army MEDEVAC crew who moves a wounded servicemember from the point-of-injury to a jointly staffed Role III field hospital. It's the Air Force provided aeromedical evacuation to Landstuhl Regional Medical Center where a triservice medical care team provides further definitive care. And then finally it's a joint team's capabilities at locations such as Walter Reed National Military Medical Center and the San Antonio Military Medical Center that provide the critical care and rehabilitative medicine for this servicemember, regardless if they are a soldier, sailor, airman, or marine. The AMEDD is focused on building upon these successes on the battlefield as we perform our mission at home and is further cementing our commitment to working as a combined team, anywhere, anytime.

We are at our best when we operate as part of a Joint Team, and we need to proactively develop synergy with our partners as military medicine moves toward a joint operating environment. The wars in Afghanistan and Iraq have led to in-

creased collaboration and interoperability with allied medical services, and have highlighted differences and gaps in our respective combat health service support systems. While the combatant commands have a responsibility to harvest and publicize lessons learned and implement new best practices operationally, the MHS has the opportunity to address and apply, at the strategic, operational and tactical levels, the lessons learned regarding combat casualty care and medical coalition operations.

MHS governance changes will change the way we currently operate for everyone. These recommended changes will strengthen our system. In the delivery of military medicine, the military departments have more activities in common than not—together we will drive toward greater common approaches in all areas, except where legitimate uniqueness requires a service-specific approach. Our commitment is to achieve greater unity of effort, improve service to our members and beneficiaries, and achieve greater efficiency through a more rapid implementation of common services and joint purchasing, as well as other opportunities for more streamlined service delivery.

Our MHS is not simply a health plan for the military; it is a military health system. A system that has proven itself in war and peace time. Our focus continues to be on supporting soldiers, other warriors and their families—past, present, and future—and on the most effective and efficient health improvement and healthcare organization to add value in the defense of the Nation. The best way to do that is through a unified and collaborative approach to care, both on the battlefield and in garrison. We must have outcome and economic metrics to measure and accountability assigned. And we must develop standard and unified performance measures across a wide-range of health and care indicators e.g., population health, clinical outcomes, access, continuity, administrative efficiency, agile operational support, warrior care, and transition programs, patient satisfaction, cost, and others, to ensure we are effective, efficient, and timely.

## INNOVATE ARMY MEDICINE AND HEALTH SERVICE SUPPORT

Many innovations in healthcare have their origins on the battlefield. Army Medicine's medical innovations borne from lessons learned in combat have become the world-class standard of care for soldiers on the battlefield and civilians around the world. As our presence in the current war begins to change, we must remain vigilant in developing and assessing strategies to protect, enhance, and optimize soldier wellness, prevention, and collective health. Through leverage of information technology and militarily relevant research strategies, we will continue to develop new doctrine and education programs to reflect best practice healthcare on and off the battlefield, while ensuring that Army Medicine remains responsive and ready. Our speed of execution, combined with the ability to leverage knowledge and actionable ideas quickly, is paramount to optimize the constancy of improvement. Our biggest competitive edge is our knowledge and our people.

In 2004, the Assistant Secretary of Defense for Health Affairs directed to the formation of the Joint Theater Trauma System (JTTS) and the Joint Theater Trauma Registry (JTTR). The JTTS coordinates trauma care for our wounded warriors. Since that time the services, working together, have created a systematic and integrated approach to battlefield care which has minimized morbidity and mortality and optimized the ability to provide essential care required for the battle injuries our soldiers are facing. The vision of the JTTS is for every soldier, marine, sailor, or airman wounded or injured in the theater of operations to have the optimal chance for survival and maximal potential for functional recovery and they are. Our 8,000-mile operating room stretches from Kandahar to Landstuhl to Walter Reed National Military Medical Center at Bethesda, to San Antonio Military Medical Center to the Veteran's Administration and other facilities throughout the United States. It's collaborative, it's integrated, and it knows no boundaries. JTTS changed how the world infuses blood products for trauma patients. In fact we just had a patient receive 400 units of blood. He coded three times on the battle field. And today he is recovering in Walter Reed National Medical Center at Bethesda. The JTTS also led to materiel changes in helmets, body armor, and vehicle design. This is not a success of technology or policy. This is a success of a trauma community that expects and values active collaboration across its 8,000-mile operating room.

The JTTR, is the largest combat injury data repository and is an integral and integrated part of the JTTS. It provides the information necessary to advance the improvement of battlefield and military trauma care and drive joint doctrine and policy, while enabling process improvement and quality assurance. Additionally, it enables more efficient and effective medical research in a resource-constrained environment. The improvements in trauma care driven by both the JTTS and JTTR are

increasing the survival rate on today's battlefield and saving lives in our Nation's civilian trauma centers through shared lessons learned. We must maintain this critical capability to ensure that we continue to drive innovation and are able to respond to our next threat.

An area in which the Army and our sister services have innovated to address a growing problem is in concussion care. The establishment of a mild traumatic brain injury (mTBI)/concussive system of care and implementation of treatment protocols has transformed our management of all battlefield head trauma. Traumatic brain injury (TBI) is one of the invisible injuries resulting from not only the signature weapons of this war, improvised explosive devices, and rocket propelled grenades but also from blows to the head during training activities or contact sports. Since 2000, 220,430 servicemembers have been diagnosed with TBI worldwide (Armed Forces Health Surveillance Center, 2011). In 2010, military medicine implemented a new mTBI management strategy to disseminate information that our healthcare workers needed and outlined the unit's responsibilities, creating a partnership between the medical community and the line units. This policy directed that any soldier who sustained a mandatory reportable event must undergo a medical evaluation including a mandatory 24-hour down time followed by medical clearance before returning to duty. The mandatory events are a command-directed evaluation for any soldier who sustains a direct blow to the head or is in a vehicle or building associated with a blast event, collision, or rollover, or is within 50 meters of a blast. Since the Department of Defense (DOD) implemented Policy Guidance for Management of Concussion/mTBI in the Deployed Setting in June 2010, deployed Commanders screened more than 10,000 servicemembers for concussion/mTBI, temporarily removed them from the battlefield to facilitate recovery, and ensured that each of them received a mandatory medical evaluation. Codification of this concussive care system into AMEDD doctrine is ongoing. To further support the TBI care strategy over the past 21 months the services have stood up 11 facilities devoted to concussive care far forward on the battlefield, staffed with concussion care physicians and other medical providers, in order to care for those with TBI at the point-of-injury. The Army has medical staff at nine of these facilities. These centers provide around-the-clock medical oversight, foster concussion recovery, and administer appropriate testing to ensure a safe return to duty. The current return to duty rate for soldiers who have received care at theater concussion centers is more than 90 percent.

To further the science of brain injury recovery, the Army relies on the U.S. Army Medical Research and Materiel Command's (MRMC) TBI Research Program. The overwhelming generosity of the Congress and the DOD's commitment to brain injury research has significantly improved our knowledge of TBI in a rigorous scientific fashion. Currently, there are almost 350 studies funded by DOD to look at all aspects of TBI. The purpose of this program is to coordinate and manage relevant DOD research efforts and programs for the prevention, detection, mitigation, and treatment of TBI. In the absence of objective diagnostic tools, MRMC is expediting research on diagnostic biomarkers and other definitive assessment tools that will advance both military and civilian TBI care. By identifying and managing these injuries on the battlefield, we have eliminated many unnecessary medical evacuation flights and facilitated unprecedented return to duty rates. The Army realizes that there is much to gain from collaboration with external partners and key organizations. We have partnered with the Department of Veterans Affairs, the Defense and Veterans Brain Injury Center, the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, academia, civilian hospitals, and the National Football League, to improve our ability to diagnose, treat, and care for those affected by TBI.

There are significant health related consequences of more than 10 years of war, including behavioral health needs, post-traumatic stress, burn or disfiguring injuries, chronic pain, or loss of limb. Our soldiers and their families need to trust we will be there to partner with them in their healing journey, a journey focused on ability vice disability.

A decade of war in Afghanistan and Iraq has led to tremendous advances in the knowledge and care of combat-related physical and psychological problems. Ongoing research has guided health policy, and multiple programs have been implemented in theater and postdeployment to enhance resiliency, address combat operational stress reactions, and behavioral health concerns. Similar to our approach to concussive injuries, Army Medicine harvested the lessons of almost a decade of war and has approached the strengthening of our soldiers and families' behavioral health and emotional resiliency through a campaign plan to align the various behavioral health programs with the human dimension of the Army Force Generation (ARFORGEN) cycle, a process we call the Comprehensive Behavioral Health System of Care (CBHSOC). This program is based on outcome studies that demonstrate the

profound value of using the system of multiple touch points in assessing and coordinating health and behavioral health for a soldier and family. The CBHSOC creates an integrated, coordinated, and synchronized behavioral health service delivery system that will support the total force through all ARFORGEN phases by providing full-spectrum behavioral healthcare. We leveraged experiences and outcome studies on deploying, caring for soldiers in combat, and redeploying these soldiers in large unit movements to build the CBHSOC. The CBHSOC is a system of systems built around the need to support an Army engaged in repeated deployments—often into intense combat—which then returns to home station to restore, reset the formation, and re-establish family and community bonds. The intent is to optimize care and maximize limited behavioral health resources to ensure the highest quality of care to soldiers and families, through a multiyear campaign plan.

The CBHSOC campaign plan has five lines of effort:

—Standardize Behavioral Health Support Requirements;
—Synchronize Behavioral Health Programs;
—Standardize & Resource AMEDD Behavioral Health Support;
—Access the Effectiveness of the CBHSOC; and
—Strategic Communications.

The CBHSOC campaign plan was published in September 2010, marking the official beginning of incremental expansion across Army installations and the Medical Command. Expansion will be phased, based on the redeployment of Army units, evaluation of programs, and determining the most appropriate programs for our soldiers and their families.

Near-term goals of the CBHSOC are implementation of routine behavioral health screening points across ARFORGEN and standardization of screening instruments. Goals also include increased coordination with both internal Army programs like Comprehensive Soldier Fitness, Army Substance Abuse Program, and Military Family Life Consultants. External resources include VA, local, and State agencies, and the Defense Centers of Excellence for Psychological Health.

Long-term goals of the CBHSOC are the protection and restoration of the psychological health of our soldiers and families and the prevention of adverse psychological and social outcomes like family violence, driving under intoxication violations, drug and alcohol addiction, and suicide. This is through the development of a common behavioral health data system; development and implementation of surveillance and data tracking capabilities to coordinate behavioral health clinical efforts; full synchronization of tele-behavioral health activities; complete integration of the Reserve components; and the inclusion of other Army Medicine efforts including TBI, patient-centered medical home, and pain management. We are leveraging predictive modeling tools to improve our insight into data, research advances, and electronic medical record systems in order to provide "genius case management" for our patients with behavioral health disease, that is, care that is tailored for each patient, and a care plan aimed at better understanding the patient, and not just their disease. Integral to the success of the CBHSOC is the continuous evaluation of programs, to be conducted by the Public Health Command (PHC).

For those who do suffer from PTSD, Army Medicine has made significant gains in the treatment and management of PTSD as well. The DOD and VA jointly developed the three evidenced-based Clinical Practice Guidelines for the treatment of PTSD, on which nearly 2,000 behavioral health providers have received training. This training is synchronized with the re-deployment cycles of U.S. Army brigade combat teams, ensuring that providers operating from MTFs that support the brigade combat teams are trained and certified to deliver quality behavioral healthcare to soldiers exposed to the most intense combat levels. In addition, the U.S. Army Medical Department Center and School collaborates closely with civilian experts in PTSD treatment to validate the content of these training products to ensure the information incorporates emerging scientific discoveries about PTSD and the most effective treatments.

Work by the AMEDD and the MHS over the past 8 years has taught us to link information gathering and care coordination for any one soldier or family across the continuum of this cycle. Our behavioral health specialists tell us that the best predictor of future behavior is past behavior, and through the CBHSOC we strive to link the management of issues which soldiers carry into their deployment with care providers and a plan down-range and the same in reverse. We have embedded behavioral health personnel within operational units circulate across the battlefield to facilitate this ongoing assessment.

The management of combat trauma pain with medications and the introduction of battlefield anesthesia was a tremendous medical breakthrough for military medicine. The first American use of battlefield anesthesia is thought to have been in 1847 during the Mexican-American War, and the use of opioid medication during

the Civil War was not uncommon. Military medicine has worked very hard to manage our servicemembers' pain from the point-of-injury through the evacuation process and continuum of care. The management of pain—both acute and chronic or longstanding pain—remains a major challenge for military healthcare providers and for the Nation at large. We have launched a major initiative through a multidisciplinary, multiservice and DOD–VA pain management task force to improve our care of pain. The use of medications is appropriate, if required, and often an effective way to treat pain. However, the possible overreliance on medication-only pain treatment has other unintended consequences, such as prescription medication use. The goal is to achieve a comprehensive pain management strategy that is holistic, multidisciplinary, and multimodal in its approach, uses state-of-the-art modalities and technologies, and provides optimal quality of life for soldiers and other patients with acute and chronic pain. The military is developing regional pain consortiums that combine the pain expertise from DOD with local Veterans Health Administration (VHA) and civilian academic medical centers. The first of many of these relationships has been established in Washington State between Madigan Army Medical Center, VA Puget Sound Health Care System, and University of Washington Center for Pain Relief. Some of the largest research projects dealing with wounded-warrior pain have been facilitated through partnerships with VHA research leaders. Collaborations of this type will ensure the latest, evidence-based pain-care techniques and protocols are available to patients. Pain research in direct support of military requirements will also be facilitated by these Federal and civilian partnerships. Other partnerships include working with organizations such as the Bravewell Collaborative and the Samuelli Institute, both of whom provide DOD with expertise in building mature integrative medicine capabilities to compliment and improve our existing pain medicine resources.

Another concerning area of emphasis for military medicine that has emerged from the current wars is "dismounted complex blast injury" (DCBI), an explosion-induced battle injury (BI) sustained by a warfighter on foot patrol that produces a specific pattern of wounds. In particular, it involves traumatic amputation of at least one leg, a minimum of severe injury to another extremity, and pelvic, abdominal, or urogenital wounding. The incidence of dismounted complex blast injuries has increased during the last 15 months of combat in the Afghanistan theater of operations (ATO). The number of servicemembers with triple limb amputation has nearly doubled this past year from the sum of all those seen over the last 8 years of combat. The number of genital injuries increased significantly from previous Operation Iraqi Freedom (OIF) rates. The severity of these injuries presents new challenges to the medical and military communities to prevent, protect, mitigate, and treat. Army Medicine has spearheaded a task force comprised of clinical and operational medical experts from DOD and VA and solicited input from subject-matter experts in both Federal and civilian sectors to determine the way forward for healing these complex injuries.

Evidence-based science makes strong soldiers and for this we rely heavily on the MRMC. MRMC manages and executes a robust, ongoing medical research program for the MEDCOM to support the development of new healthcare strategies. I would like to highlight a few research programs that are impacting health and care of our soldiers today.

The Combat Casualty Care Research Program (CCCRP) reduces the mortality and morbidity resulting from injuries on the battlefield through the development of new life-saving strategies, new surgical techniques, biological and mechanical products, and the timely use of remote physiological monitoring. The CCCRP focuses on leveraging cutting-edge research and knowledge from Government and civilian research programs to fill existing and emerging gaps in combat casualty care. This focus provides requirements-driven combat casualty care medical solutions and products for injured soldiers from self-aid through definitive care, across the full spectrum of military operations.

The mission of the Military Operational Medicine Research Program (MOMRP) is to develop effective countermeasures against stressors and to maximize health, performance, and fitness, protecting the soldier at home and on the battlefield. MOMRP research helps prevent physical injuries through development of injury prediction models, equipment design specifications and guidelines, health hazard assessment criteria, and strategies to reduce musculoskeletal injuries.

MOMRP researchers develop strategies and advise policy makers to enhance and sustain mental fitness throughout a servicemember's career. Psychological health problems are the second leading cause of evacuation during prolonged or repeated deployments. MOMRP psychological health and resilience research focuses on prevention, treatment, and recovery of soldiers and families behavioral health problems, which are critical to force health and readiness. Current psychological health

research topic areas include behavioral health, resiliency building, substance use and related problems, and risk-taking behaviors.

The Clinical and Rehabilitative Medicine Research Program (CRMRP) focuses on definitive and rehabilitative care innovations required to reset our wounded warriors, both in terms of duty performance and quality of life. The Armed Forces Institute of Regenerative Medicine (AFIRM) is an integral part of this program. The AFIRM was designed to speed the delivery of regenerative medicine therapies to treat the most severely injured United States servicemembers from around the world but in particular those coming from the theaters of operation in Iraq and Afghanistan. The AFIRM is expected to make major advances in the ability to understand and control cellular responses in wound repair and organ/tissue regeneration and has major research programs in limb repair and salvage, craniofacial reconstruction, burn repair, scarless wound healing, and compartment syndrome.

The AFIRM's success to date is at least in part the result of the program's emphasis on establishing partnerships and collaborations. The AFIRM is a partnership among the U.S. Army, Navy, and Air Force, DOD, VA, and the National Institutes of Health. The AFIRM is composed of two independent research consortia working with the U.S. Army Institute of Surgical Research. One consortium is led by the Wake Forest Institute for Regenerative Medicine and the McGowan Institute for Regenerative Medicine in Pittsburgh while the other is led by Rutgers—the State University of New Jersey and the Cleveland Clinic. Each consortium contains approximately 15 member organizations, which are mostly academic institutions.

The health of the total Army is essential for readiness, and prevention is the best way to health. Protecting soldiers, retirees, family members and Department of the Army civilians from conditions that threaten their health is operationally sound, cost effective, and better for individual well-being. Though primary care of our sick and injured will always be necessary, the demands will be reduced. Prevention—the early identification and mitigation of health risks through surveillance, education, training, and standardization of best public health practices—is crucial to military success. Army Medicine is on the pathway to realizing this proactive, preventive vision.

The newest addition to the Army Medicine team is the PHC, having reached initial operational capability in October 2010 with full-operational capability is targeted for October 2011. As part of the overall U.S. Army Medical Command reorganization initiative, all major public health functions within the Army, especially those of the former Veterinary Command and the Center for Health Promotion and Preventive Medicine have been combined into a new PHC, located at Aberdeen Proving Ground in Maryland. The consolidation has already resulted in an increased focus on health promotion and has created a single accountable agent for public health and veterinary issues that is proactive and focused on prevention, health promotion, and wellness. Army public health protects and improves the health of Army communities through education, promotion of healthy lifestyles, and disease and injury prevention. Public health efforts include controlling infectious diseases, reducing injury rates, identifying risk factors and interventions for behavioral health issues, and ensuring safe food and drinking water on Army installations and in deployed environments. The long-term value of public health efforts cannot be overstated:

—public health advances in the past century have been largely responsible for increasing human life spans by 25 years; and

—the PHC will play a central role in the health of our soldiers, deployed or at home.

A significant initiative driven by the PHC which will be instrumental to achieving public health is our partnering with Army installations to standardize existing Army Wellness Centers to preserve or improve health in our beneficiary population. The centers focus on health assessment, physical fitness, healthy nutrition, stress management, general wellness education, and tobacco education. They partner with providers in our MTFs through a referral system. I hold each MTF Commander responsible for the health of the extended military community as the installation Director of Health Services (DHS).

Army Medicine has put a closer lens on women's health through a recently established Women's Health Task Force to evaluate issues faced by female soldiers both, in Theater and CONUS. Women make up approximately 14 percent of the Army Active Duty fighting force. As of August 2011, almost 275,000 women have deployed in support of OIF/OND/OEF. The health of female soldiers plays a vital role in overall Army readiness. Army Medicine recognizes the magnitude and impact of women's health and appreciates the unique challenges of being a woman in the Army. In order for women to be fully integrated and effective members of the team, we

must ensure their unique health needs are being considered and met. The Task Force combines talent from different disciplines:

—civilian and military;

—officer and enlisted; and

—collaborates with our private industry partners.

We will assess the unique health needs and concerns of female soldiers, conducting a thorough review of the care currently provided, identifies best practices and gaps, and revises, adapts, and initiates practices so that we may continue to provide first class care to our female warriors. The Women's Health Campaign Plan will focus on standardized education and training on women's health, logistical support for women's health items, emphasis on the fit and functionality of the Army uniform and protective gear for females; and research and development into the psychosocial effects of combat on women. While sexual assault is not a gender specific issue, the Women's Health Task Force is working with Headquarters, Department of the Army (HQDA) G–1 to evaluate theater policy with regards to distribution of sexual assault forensic examiners and professionalizing the role of the victim advocate. The task force is collaborating with tri-service experts to investigate the integration of service policies and make recommendations.

While proudly acknowledging our many healthcare accomplishments at home and in theater, I want to turn to the future. It is time we further posture Army Medicine in the best possible manner that aligns with the MHS strategic vision that moves us from healthcare to health. We must ask, where does "health" happen, and I have charged Army Medicine leadership to spearhead the conversion to health and to fully integrate the concept into readiness and the overall strategy of health in the force. Improved readiness, better health, better care, and responsibly managed costs are the pillars on which the MHS Quadruple Aim stands, but between those pillars, or in that "White Space", is where we can create our successful outcomes. Sir William Osler, considered to be the Father of Modern Medicine, said "One of the first duties of the physician is to educate the masses not to take medicine." A snapshot of the average year with the average patient shows that healthcare provider spend approximately 100 minutes with their patient during that year. How much health happens in those 100 minutes? There are approximately 525,600 minutes in that year, yet we focus so much of our time, effort, and spending on those 100 minutes; the small fraction of a spot on the page. But what happens in the remaining 525,600 minutes of that year? What happens in the "White Space?" I will tell you what I think happens—that is where health is built, that is where people live. The "White Space" is when our soldiers are doing physical fitness training, choosing whether to take a cigarette break, or deciding whether they will have the cheeseburger or the salad for lunch. It's when family members are grocery shopping or cooking a meal. The "White Space" is when soldiers spend time with their family, or get a restful night of sleep, or search the Internet to self-diagnose their symptoms to avoid adding to those 100 minutes in the clinician's office. We want to lead the conversation with Army leadership to influence the other 525,600 minutes of the year with our soldiers . . . the "White Space". In order for us to get to health, we must empower patients, move beyond the 100 minutes, and influence behaviors in the white space. The way ahead is connected, collaborative, and patient-centered.

I have discussed but a few of the important medical issues and programs that are relevant to the current wars and vital to the future of Military Medicine require solutions and funding that will go years beyond the end of the current wars. Our Nation, our Army, and Army Medicine have a duty and responsibility to our soldiers, families, and retirees. There will be considerable ongoing healthcare costs for many years to support for our wounded, ill, or injured soldiers. The programs we have established to care for our soldiers and families cannot falter as our deployed footprint diminishes. The level of care required does not end when the deployed soldier returns home.

## OPTIMIZE RESOURCES

One of Army Medicine's greatest challenges over the next 3–5 years is managing the escalating cost of providing world-class healthcare in a fiscally constrained environment. People are our most valuable resource. We will employ everyone to their greatest capacity and ensure we are good stewards of our Nation's resources. To capitalize on the overall cost savings of procurement and training, we will standardize equipment, supplies, and procedures. And we will leverage our information technology solutions to optimize efficiencies.

Despite the cost containment challenges we face, we must accomplish our mission with an eye on reducing variance, focusing on quality, and expecting and adapting to change. These are our imperatives. Army Medicine will focus on collaborative

international, interagency, and joint partnerships and collective health, including prevention and wellness, to ensure the enduring capabilities required to support the current contemporary operating environment and those of the future are retained.

We will be methodical and thoughtful in our preparation for budget restraints to ensure that the high-quality care our warriors and military family demand is sustained. With the anticipated downsizing of forces, there will be a need to critically look at where medical services could be consolidated. However, we will use this as an opportunity to evaluate workloads to maximize efficiencies while maintaining effectiveness and focus on what services are best for our beneficiary population and dedicate resources to those.

The rising cost of healthcare combined with the increasingly constrained Defense budget poses a challenge to all within the MHS. DOD offers the most comprehensive health benefit, at lower cost, to those it serves than the vast majority of other health plans in the Nation—and deservedly so. The proposed changes in TRICARE fees do not change this fact—the TRICARE benefit remains one of the best values for medical benefits in the United States with lower out-of-pocket costs compared to other healthcare plans. Adjustment to existing fees, and introduction of new fees are proposed. Importantly, these benefit changes exempt soldiers, and their families, who are medically retired from Active service, and families of soldiers who died on Active Duty from any changes in cost-sharing. I support these modest fee changes when coupled by the MHS's shift in focus from healthcare to health, maintaining health and wellness, identifying internal efficiencies to capitalize on, and instituting provider payment reform.

A major initiative within Army Medicine to optimize talent management and move towards a culture of trust, discussed earlier in this testimony, is the Human Systems Transformation, led by a newly established Human Systems Transformation Directorate. Army Medicine's ability to efficiently transform our culture requires a roadmap for achieving planned systemic change. The plan focuses on enhanced investment in four human system tiers (lines of effort) to:

- —improve senior leader development (new command teams/designated key staff positions);
- —increase investment in the development of Army Medicine workforce members;
- —establish a cadre of internal organizational development professionals;
- —leverage partnering; and
- —collaboration opportunities with internal and external stakeholders.

In order to change the culture of our organization, we must invest in our people.

### DEVELOP LEADERS

At the core of our medical readiness posture is our people. The Army calls each of us to be a leader, and Army Medicine requires no less. We will capitalize on our leadership experiences in full-spectrum operations while continuing to invest in relevant training and education to build confident and competent leaders. Within this focus area, we will examine our leader development strategy to ensure that we have clearly identified the knowledge, skills, and talent required for leaders of Army Medicine. We will continue to develop adaptive, innovative, and decisive leaders who ensure delivery of highly reliable, quality care that is both patient-centered and inherently trustworthy. Being good stewards of our Nation's most treasured resources, through agile, decisive, and accountable leadership, we will continue to build on the successes of those who have gone before us. Our recruitment, development, and retention of medical professionals—physicians, dentists, nurses, ancillary professionals, and administrators—remains high. With the support of the Congress, through the use of flexible bonuses and special salary rates, we have been able to meet most of our recruiting goals. Yet we recognize that competition for medical professionals will grow in the coming years, amidst a growing shortage of primary care providers and nurses.

### SUPPORT THE ARMY PROFESSION

Army Medicine has a rich history of sustaining the fighting force, and we need to tell our story of unprecedented successes across the continuum of care—from the heroic efforts of our medics at the point-of-injury to the comprehensive rehabilitation of our wounded warriors in overcoming exceptional challenges. After more than 10 years of persistent conflict, it is time to renew our collective commitment to the Army, its ideals, traditions, and ethos. As we have stood alongside our warfighters on the battlefield we have earned the trust of our combat-tested warfighters, and it is critical that we continue to demonstrate integrity and excellence in all that we do.

WORLDWIDE INFLUENCE

Army Medicine reaches around the world; from those supporting two theaters of war and humanitarian relief efforts to those conducting militarily relevant research and providing care to our military families overseas, AMEDD soldiers and civilians answer our Nation's call. The time that two oceans protected our freedom-loving Nation is long gone, and replaced with ever-present risks to our way of life. The Nation relies on its Army to prepare for and conduct full-spectrum operations from humanitarian and civil support to counterinsurgency and general war throughout the world. Army Medicine stands committed to sustain the warfighter and accomplish the mission, supporting the world's most decisive land force and the strength of the Nation.

In the MHS, one of our biggest challenges lies in integrating the shared electronic health record (EHR) information available in our systems with the information that is provided through our civilian network providers and VA partners. Without that seamless integration of data, healthcare cannot be coordinated properly for the patients across all providers and settings. To support DOD and VA collaboration on treating PTSD, pain, and other healthcare issues, the EHR should seamlessly transfer patient data between and among partners to improve efficiencies and continuity of care. The DOD and the VA share a significant amount of health information today and no two health organizations in the Nation share more nonbillable health information than the DOD and VA. The Departments continue to standardize sharing activities and are delivering information technology solutions that significantly improve the secure sharing of appropriate electronic health information. We need to include electronic health information exchange with our civilian partners as well—a health information systems which brings together three intersecting domains—DOD, VA, civilian—for optimal sharing of beneficiary health information and to provide a common operating picture of healthcare delivery. These initiatives enhance healthcare delivery to beneficiaries and improve the continuity of care for those who have served our country. Previously, the burden was on servicemembers to facilitate information sharing; today, we are making the transition between DOD and VA easier for our servicemembers. The AMEDD is committed to working collaboratively with our partners across the MHS to seek solutions that will deliverable a fully integrated EHR that will enhance healthcare delivery to beneficiaries and improve the continuity of care for those who have served our country.

At the core of our Army is the warfighter. A focus on wellness and prevention will ensure that our warriors are ready to heed the Nation's call. Yet in the Army today we have more than a division of Army soldiers who are medically not ready (MNR). This represents a readiness problem. We created a Soldier Medical Readiness Campaign to ensure we maintain a health and resilient force. The deployment of healthy, resilient, and fit soldiers and increasing the medical readiness of the Army is the desire end state of this campaign. The campaign's key tasks are to:

—provide Commanders the tools to manage their soldiers' medical requirements;
—coordinate, synchronize and integrate wellness, injury prevention, and human performance optimization programs across the Army;
—identify the MNR population;
—implement medical management programs to reduce the MNR population;
—assess the performance of the campaign; and
—educate the force.

Those soldiers who no longer meet retention standards must navigate the physical disability evaluation system (PDES). The present disability system dates back to the Career Compensation Act of 1949. Since its creation problems have been identified include long delays, duplication in DOD and VA processes, confusion among servicemembers, and distrust of systems regarded as overly complex and adversarial. In response to these concerns, DOD and VA jointly designed a new disability evaluation system to streamline DOD processes, with the goal of also expediting the delivery of VA benefits to servicemembers following discharge from service. The Army began pilot testing the disability evaluation system (DES) in November 2007 at Walter Reed Army Medical Center and has since expanded the program, now known as the IDES, to 16 MTFs. DOD has replaced the military's legacy disability evaluation system with the IDES.

The key features of the IDES are a single physical disability examination conducted according to VA examination protocols, a single disability rating evaluation prepared by the VA for use by both Departments for their respective decisions, and delivery of compensation and benefits upon transition to veteran status for members of the Armed Forces being separated for medical reasons. The DOD and VA continue to move towards reform of this process by identifying steps that can be reduced or eliminated, ensuring the servicemembers receive all benefits and entitlements throughout the process. Within the Army, I recently appointed a task force

focused on examining the Integrated Disability Evaluation Process in parallel with ongoing MHS efforts. The AMEDD is committed to working collaboratively with our partners across the MHS to seek solutions that will best serve those who have selflessly served our country.

I would like to close today by discussing the Army Medicine Promise. The Promise, a written covenant that will be in the hands of everyone entrusted to our care over the next year, tells those we care for what we, the Army Medicine team, believe they deserve from us. It articulates what we believe about the respect and dignity surrounding the patient care experience. The Promise speaks to what we believe about the value of the care we deliver, about the compassion contained in the care we deliver and how we want to morally and ethically provide care for those we serve. I'll share two items from the Promise with you.

"We believe our patients deserve a voice in how army medicine cares for them and all those entrusted to our care."

Our patients want to harness innovation to improve or change their health and we are empowering their efforts via our wellness centers. At our premier wellness clinics, we collaborate with patients to not only give them the tools they need to change their health but also a lifespace partner to help them change their life. Our wellness clinics are new and still evolving, but I am committed to increasing their numbers and expanding their capabilities in order to dramatically impact those more than 500,000 minutes out of the year when our patients are living life outside the walls of our hospitals. The wellness clinics allow us to reach out to those we care for rather than them having to reach in.

"We believe our patients deserve an enhanced care experience that includes our belief in their desire to heal, be well, and have an optimal life."

The warrior transition care comprehensive transition plan supports this promise by providing countless wounded warriors with a dynamic plan for living that focuses on the soldier's future across six domains of strength—career, physical, emotional, social, family, and spiritual strength. The plan empowers soldiers to take control of their lives.

In conclusion, the AMEDD has served side-by-side with our sister services in Iraq and Afghanistan, and at home we will continue to strengthen those collaborative partnerships to provide responsive, reliable, and relevant healthcare that ensures a healthy fighting force and healthy families. To succeed, we must remain ready and relevant in both our medical proficiencies as well as our soldier skills. We will continue to serve as a collaborative partner with community resources, seek innovative treatments, and conduct militarily relevant research to protect, enhance, and optimize soldier and military family well-being. Soldiers, airmen, sailors, marines, their families, and our retirees will know they are receiving care from highly competent and compassionate professionals.

I am incredibly honored and proud to serve as the 43rd Surgeon General of the Army and Commander, U.S. Army Medical Command. There are miracles happening at our command outposts, forward operating bases, posts, camps, and stations every day because of the dedicated soldiers and civilians that made up the AMEDD. With continued support of the Congress we will lead the Nation in healthcare, and our men and women in uniform will be ready when the Nation calls them to action. Army Medicine stands ready to accomplish any task in support of our warfighters and military family.

Chairman INOUYE. Thank you very much, General.

I have a question I'd like to ask the whole panel. In 2003, the Nurse Chiefs of all the services had an increase in their rank to two stars. Last month, the Congress received a directive from the DOD. In this directive, they suggested, or, in fact, mandated that this promotion be repealed and nurses will become one star again.

In 1945, when I was in my last hospital stage, the chief of the Nurse Corps in the Army was a colonel. The senior nurse in my hospital was a captain. And throughout my care, I saw the physician once a week. I saw the nurse 7 days a week, every day, every hour. And I felt, as most of the men in that ward, that something was drastically wrong. And so I was happy when the announcement was made to increase it to two stars, but now there's one

star. I want you to know that I'm against this, and I think this is not the right thing to do at this moment in our medical history.

So, I'd like to ask you, what effect will this have on the services? Will it have a negative effect? Will it affect the morale? Will it affect the service?

May I start with the Admiral?

Admiral NATHAN. Thank you for the question, Mr. Chairman. And may I echo your sentiment about military nursing and the role it plays, especially these days, as we compartmentalize house staff and physician training, and limit the hours. The military nurse is often the most steadfast provider, from a continuity perspective, of the patient.

CHIEF NURSE CORPS RANK

That said, I believe that some of the changes they have in mind don't prohibit a Navy Nurse Corps officer from obtaining the rank of two stars. While it just would not be automatically conveyed, they would compete among other one-star admirals and generals for the senior healthcare executive rank of two stars.

I think one of the things that, and, again, you may want to get this specifically from your chiefs of the Nurse Corps, but one of the benefits that it may bring with it is automatic promotion to two stars then does limit, at least in the Navy, the number of officers we can promote from captain to one star in the Nurse Corps. And so, it may limit the actual numbers who are flag officers.

But there will be—in the Navy, there will always be Nurse Corps admirals, and they will, as they have in years past, be able to compete for two stars, and many of them do. We have Nurse Corps officers who are in charge of many of our major medical facilities. They have, in the past, been in charge of our major medical centers. They run the major headquarters of the Bureau of Medicine and surgery. For those who compete successfully for the second star in different arenas, they can then relinquish chief of the Nurse Corps, and we're then at liberty to pick another one-star admiral to be the chief of the Nurse Corps.

Thank you, Sir.

Chairman INOUYE. Thank you. General Horoho.

General HOROHO. Thank you, Senator. First, I'd like to thank you very much, because you've been extremely supportive in the rank structure that we've had across our military.

This has really been a maturation process within Army Medicine. Over the last—I'd probably say the last 6 years, we have a leader development program that has allowed Army nurses to be very competitive for command, which is our stepping stone for general officer. And so we have nurses that are extremely competitive for a level one and level two command, and now very competitive for our branch and material one stars.

So, since DOD has supported the direction of reducing from two stars to one star, I believe we have a leadership development program that will allow our nurses to actually compete across the board for all of the one stars and then be competitive for two stars in the future.

Chairman INOUYE. General Green.

General GREEN. Sir, I would expand upon what Admiral Nathan said, in terms of not only are our nurses vital to the in-patient arena but in the patient-centered medical homes, and the things that we're doing with—they have much more contact with the outpatient as well, because of their roles as case managers and disease managers. And so, they do, certainly, I agree with you, is what I'm saying, have an extremely vital role.

In terms of general officers, because of the economy and the Department's decision to take efficiencies, the Air Force concurs. Actually, we're the smallest of the medical services. We will lose 1 net general officer, going from 12 to 11. If the decision is made to not go directly to two star, we will still have a one-star nurse, who will have the same responsibilities in terms of oversight of nursing and other important programs.

We also, like the Army, have a very strong leadership development program, and I believe our nurses will compete very well, because there's nothing in the proposal that's come to you that would restrict them from competition for two star, it just doesn't make that particular corps position an automatic two star.

Thank you, Sir.

Chairman INOUYE. Well, I thank you very much, but I can assure you that I will be voting and speaking against it.

TRICARE FEES

I'd like to ask this question of the Admiral. In the fiscal year 2013 budget, it is assumed that $423 million in savings will be based upon new TRICARE enrollment fees and increases in co-pay for prescription drugs. The House has just announced that this will not pass muster in the House. It will not see the light of day. What is your thought?

Admiral NATHAN. Thank you, Sir. This is clearly an issue that's front and center among many organizations, both in our Nation's leadership, the military leadership, and our beneficiary populations.

We recognize that the cost of healthcare has escalated dramatically. In 2001, the Department of Defense (DOD) spent approximately $19 billion on its Defense Health Program (DHP). And this year, it's approximately $51 billion, and expected to reach the $60 billion point in the next few years.

So, the onus is on us to look for ways to sustain the healthcare benefit, to continue to fund it, to keep faith with our beneficiaries, to keep faith with those men and women who paid with years of service, and often with sacrifice of their lives and their families to earn this benefit.

Given the resource constraints and trying to get a handle on healthcare costs, we are looking at organizational changes, governance changes, trying to find efficiencies through transparency increased efficiency, reducing redundancy among the services, and finding more joint solutions. The other was to determine if the healthcare cost to the beneficiary has kept up over the last 15 years with the total benefit package that beneficiaries receive.

Neither I nor my colleagues here were involved in the actual number crunching or the decisions of tiering or levels of tiering to the various beneficiaries, but we do understand that the cost of the

healthcare beneficiary has remained unchanged, and actually decreased in relative dollars over the last 10 to 15 years. The TRICARE enrollment fees have remained static at about $400 to $500 per year, since the 1990s. The drug co-pays have changed very little. And, in fact, there have been additional programs implemented including TRICARE For Life, and others, which have greatly increased the cost to the Government for beneficiary healthcare.

So, the bottom line, Sir, I believe this is an effort to try to find a fair increase in the participation of the beneficiaries that is commensurate or not above the benefits actually received over the last several years.

And I'll just close by saying, I recognize the emotion here. I'm an internal medicine doctor. I take care of a large population of patients for whom these changes may affect. We always worry about whether or not we're keeping or breaking faith with the commitment they made and the benefits they should receive. I'm vitally interested in making sure that we can have a sustainable program that would allow retirees and their family members to continue to get this benefit, and I believe this is part and parcel of this effort.

Thank you, Sir.

Chairman INOUYE. Thank you, Admiral.

Generals Green and Horoho, do you have any comments to make? I'm just curious. The military leadership, in general, seems to be supportive, but I'd like to know what the thoughts of families and troops may be, because they're not here to testify. Have you heard from them?

General GREEN. Sir, we're hearing from the coalition the same as I'm sure you are now, in terms of their representatives to this process, because the proposed fee increases would affect the Active Duty and their family members very minimally, in terms of some of the co-pays with pharmacy, and if they happen to be in TRICARE Prime, the change to the catastrophic cap could affect those. We're not hearing too many things from our Active Duty population.

The retirees, who bear the brunt of some of the cost increases, I think they're being very vocal, and we're hearing from all of the different agencies and representative groups telling us that they're not supporting the activities that are being proposed.

The Air Force supports the Department's position. On a personal level, obviously, I am going to be someone who is joining the ranks of retirees, and will be paying these fees.

General GREEN. And I would tell you that there is a mismatch right now, over the years, based on the inflation that is in the healthcare indexes that goes into the cost-of-living increases that's not been brought back to the beneficiaries.

And so, in other words, we've been giving cost-of-living increases to the retirement, but we haven't been increasing any of the out-of-pocket costs. And so, although you're getting money that's respective of the healthcare inflation, you're not actually paying any of the healthcare costs that have come up.

And so, I believe that the out-of-pocket costs need to increase, and on a person that would be willing to pay the fees that are proposed. I do think that, you know, there may be other ways that we could reach a similar endpoint, but the Department has put consid-

erable work and had taskforce that is basically brought this forward, which is why the Air Force supports the Department's position at this time.

Chairman INOUYE. General Horoho.

General HOROHO. Sir, in addition to what my colleagues have said, I think where we've heard back is more from the coalitions that are out there. Senior leaders that are retired have been very supportive of this, of wanting to ensure that our military benefit continues. And so, their feedback has been in support of the fee increases.

And in addition to DOD, or with the fee increases, I think really what's at stake is the need for all of us to be critically looking at our programs and our processes, and figure out where we have redundancies, so that we can look at saving dollars in other areas to offset some of the rising costs in healthcare for the future.

Chairman INOUYE. Thank you very much.

Vice Chairman.

STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. I'm pleased to join you in welcoming our distinguished panel in thanking you for the responsibilities you've assumed under the jobs that you now have, and the work you are doing for our Armed Forces. We think it's very important that we provide a standard of hospital and nursing care, and medical assistance to our men and women in uniform, and we know that you're responsible in your services for seeing that that becomes a reality, and it is ministered in a way that's sensitive to the needs of our military men and women in service, and also sensitive to the retirees as they become more concerned about costs, and cost-of-living adjustments, and availability of services. And we share those concerns, and we know that you'll do your best to help meet the challenges that your official duties require.

So, that's a long way of saying thank you for doing what you do. We want to be sure that we provide the resources that are necessary to ensure a sensitive and professional standard of care that is commensurate with the sacrifice and service, and the importance of that to our Nation.

In your assessment, let me just start here, General Horoho, thank you for your comments that you've already made in your statement and in your answers to Senator Inouye's questions. What, if anything, do you think we could do in terms of targeting funding or making changes in the support that we provide as the Congress to the Army's medical needs and generally speaking to those who are responsible for managing these funds? Is the level of funding adequate to carry out our responsibilities to the men and women in the Armed Forces?

General HOROHO. Thank you, Vice Chairman, for that question.

Right up front, the funding this year is absolutely adequate for us to be able to meet our mission. The area that I think will be critical to ensure that we continue with funding will be the funding for our scholarship programs that allows us to bring in the right talent, so our physicians, our dentists, and our nurses, and our social workers, I think, that's very, very critical, so that we sustain the right talent to be able to care for our warriors in the future.

The other area that I think is critical to make sure that we have the right funding for is the care for our warriors with our warrior transition units. As we draw down as an army, we will continue to have a large number of patients that we will need to care for for their psychological wounds, as well as physical injuries that have occurred over the last 10 years. And so, those are probably the two most important areas that I think we need to ensure that funding remains available.

Senator COCHRAN. Thank you.

General HOROHO. Thank you.

Senator COCHRAN. Admiral Nathan, what's your response to the same question?

MILITARY MEDICAL PROGRAM FUNDING

Admiral NATHAN. Thank you, Sir.

Again, we certainly believe that the funding is adequate to meet our mission from the President's budget for fiscal year 2013. The areas that we remain concerned about, as we see looming budget pressures, are, in many ways, in concert with what General Horoho said. We want to make sure that our wounded warrior programs, especially those that facilitate transition, remain intact. We want to continue to partner with not only our military but our private sector and academic partners, and finding best practices, and to engage them in programs, so that we can create a unified approach to some of the more vexing challenges from 10 years of war, including post-traumatic stress and TBI.

We're also committed to military medical engagement via humanitarian assistance disaster relief in our overseas facilities. We believe they are great ambassadors of the American passion, the American ethos, and show an American military that brings light and help as much as it can bring heat. So we're also hoping to make sure that those remain robust, and an everlasting presence of what we do in the military, as well as our support of the kinetic operations.

Thank you.

Senator COCHRAN. Thank you.

General Green.

General GREEN. And Sir, our budget is also adequate. I mean it meets all of our needs this year. All of our programs are fully funded.

I would add one thing to the scholarship request of General Horoho, and that is that I would tell you that I think we also need to be certain to fund our Uniform Services University, because they give us a highly professional officer that stays with us much longer than some of the folks who are just with the scholarships, and coming from our outside medical schools.

In addition to that, I would ask that you watch very carefully to ensure that we still have funding for research, and TBI, and PTSD. I think that we're learning a great deal, and we need to learn more because of this burgeoning problem, as we bring people home from the wars.

And finally, one thing that's kind of outside of your question, but I would tell you that to make certain that we are actually doing the best job possible with the money, I would tell you that we need

to move towards a single financial accounting system for DHP dollars. Whichever one is chosen would be fine, but I think to avoid redundancy and to make certain that we're delivering the most efficient healthcare, we need a single system that actually gives us visibility of all programs within the DHP.

Thank you, Sir.

Senator COCHRAN. Thank you.

For those of us who don't hear the terms used by the military every day, TBI means "traumatic brain injury," doesn't it?

General GREEN. Yes, Sir.

Senator COCHRAN. Okay.

General GREEN. Yes, Sir. And post-traumatic stress. And then the DHP is "Defense Health Program."

Senator COCHRAN. Good. Thank you.

Chairman INOUYE. Thank you very much.

Senator Mikulski.

STATEMENT OF SENATOR BARBARA A. MIKULSKI

Senator MIKULSKI. Mr. Chairman, after I conclude these questions, I have to go to the NIH hearing, so I just want to say to the second panel of nurses, we really salute you for your service, and echo the comments made by the chairman. And I just want to say to you and to the people who are also part of our military Nurse Corps service, you are stars. You are stars. We just want to make sure you have the chance to wear them on your shoulders. So, we want to thank you for that.

And also, Mr. Chairman, I hope, as we look at this, we continue, as we listen to our Nurse Corps, focus on workforce needs, both doctors and nurses, and then other areas of allied health, to make sure we have all that we need to do to backup.

Now, let me go right to my question. First of all, I think we want to say to all of those serving in military medicine, what stunning results we've achieved in acute battlefield medicine. I think you're breaking history books in terms of lives saved, and it's an unparalleled seamless network, General, from response on the battlefield, to the transport through the Air Force, to Germany, back home here. So, we really want to thank you for that, and General Green, for you, and all of those who serve in the Air Force.

But, let me get to my question, because it goes to, we have two challenges. War is war. So, there are those who suffer the injuries, because of the weapons of war. This is a whole genre that we're focusing on. But then there's the consequences of war, and the consequences of the military, so it's those who are Active in duty, and then their families.

Much has been said now about resiliency. Resiliency. So that no matter what happens to you, even going in that white space, General Horoho, that you talked about is there.

So, here is my question, and you refer to it in many of your testimony: The medical home. You talk about your new partnerships with Samueli Institute, headed by a former Walter Reed doc, the Bravewell collaborative. Could you share with me what this whole issue of resiliency and the use of complementary and integrative techniques, and tell me where we are, when the momentum that was created by Admiral Mullen, General Schoomaker, and other of

our surgeon generals, on this whole idea of resiliency wellness that facilitated being ready for combat, support that the family embraced, and then, quite frankly, in their recovery.

Did they have a good idea? So, could you tell me what you're doing, and does it have efficacy?

General HOROHO. Thank you, Senator, for the question.

We are continuing to build upon the prior efforts of Admiral Mullen, General Casey, as well as General Schoomaker, and really looking at how do we ensure that we focus on the mind, body, spirit, and soul of our warriors and their family members. And we've learned over this 10-year conflict that we can't just treat our warriors, that we absolutely have to treat the family, because it impacts on both.

So, we've started with the platform of having patient-centered medical homes, really focusing on continuity of care, and wellness, and managing their care. We've also stood up community-based clinics, and so, we have pushed healthcare out into the communities where the patients live, with one standard of care of being very much focused on embedding behavior health in our primary care, as well as our community-based clinics.

We've stood up a pain management taskforce that is now on its second year, and last year it was nationally recognized for the work that was done. Those recommendations from the pain management taskforce are now going to be implemented this year. We'll have nine across each one of our major medical centers, and the complimentary and integrative medicine that occurs with that, so we're incorporating yoga, acupressure, acupuncture, mindfulness, sleep management, and really trying to get to more of the prevention when we look at healthcare and wellness. We've taken these concepts and integrated some of these on the battlefield.

When I was deployed in Afghanistan, we had many areas where we actually coordinated care with behavior health and concussive care, and incorporated some of the mindfulness training there, and sleep management.

Senator MIKULSKI. Has that had efficacy? I mean, you know, we make much of evidence-based medicine, and I think we're all there. We can't afford to waste time or dollars. So, could you talk about the efficacy of those efforts? Were Mullen and all of them on the right track?

General HOROHO. I do believe we're on the right track. We have seen a decrease in the reliance of poly-pharmacy.

Senator MIKULSKI. Does that mean drugs?

General HOROHO. Yes, Ma'am. Multiple drugs. We've had many of our warriors that have used yoga, and acupressure, and acupuncture vice narcotic pain medicine. So, we are seeing help in that area.

We also have a patient caring touch system that has been rolled out that's one standard of care across all of Army Medicine. And with that, we have seen a decrease in medication errors. We've seen an increase in documentation of pain management. We've seen a decrease in left without being seen in our emergency rooms. So, increase in continuity of care. So, we are seeing critical lab values that are equating to better patient outcomes. And we've got a ways to go, as we look at how do you measure wellness. What are

the metrics that we should be looking at that really measures wellness and improved mental and spiritual health? So, we've got tremendous work to do in that area, but I do believe we're moving in the right direction.

Senator MIKULSKI. Well, and I think it goes to the recovery from them, also, because that deals with many of the consequences of frequent deployments, the stresses, et cetera.

Admiral Nathan, did you want to comment on that, because you also, in your testimony, talked about body, mind, spirit medicine, which is the whole warrior, and the support of the warrior.

Admiral NATHAN. Yes, Ma'am.

Senator MIKULSKI. The family support.

Admiral NATHAN. Thank you, Senator. You made two great points in your question. One is, how do we support the warrior and the family while they're deployed in operations, undergoing warfare, and then, how do we support them as a unit when they return home as a family unit, seeking care in a garrison environment?

WOUNDED WARRIOR AND FAMILY SUPPORT PROGRAMS

Some of these things have been touched on. We have unprecedented surveys now and assessments of our personnel on deployments. We have the behavioral needs assessment study, which is done of all our individual augmentees in the Navy. The Marines have a similar program, where they are all surveyed. We've actually seen, because of this interaction, a decrease in the stigma of seeking help. We've seen a decrease in the rate of psychotropic drugs, basically antidepressants being used on the battlefield, in our populations.

Senator MIKULSKI. That's pretty big, isn't it?

Admiral NATHAN. I think so. And I think we can attribute it to the engagement that the services now have in training not only the medical professionals who are deployed but the line officers and the operators who are deployed along with our servicemembers.

In the Navy and Marine Corps, we have the combat and operational stress control (COSC) training and the operational stress control and readiness (OSCAR) training. These are embedded teams, with mental health professionals, and corpsmen and medics, who have been trained to engage and embed with the war-fighting forces.

In the Marine Corps, we've trained more than 5,000 marines who are battalion commanders, garrison commanders, squadron commanders on the signs and symptoms of stress, of depression, of looking for those first tips of somebody who's starting to bend before they break. I think that has helped us both in getting people referred earlier and in destigmatizing the scenario where somebody raises their hand and says, "I'm not doing well."

In the family units, we have now 23 Families Overcoming Under Stress (FOCUS) locations, which are centered on taking care of children, families, the warrior themselves. It has a variety of outreach programs to take care of kids who are either failing in school or suffering from the parent being deployed. These can be reached both by walking in, making appointments, and virtually by telephone.

For the Reserve community, we have the Psychological Health Outreach Program, which both can be reached by telephone or remotely walking in. We also have the Returning Warrior Workshops. The returning warrior from Reserves and spouse attend one of these, and they're held on the weekends. They're an intensive 72-hour program, where all the facilities and programs are made available to them.

Senator MIKULSKI. Admiral Nathan, I think in the time for the subcommittee members——

Admiral NATHAN. Yes, Ma'am.

Senator MIKULSKI. And the Chairman's being generous, if we could have kind of a white paper or something from you on this, because I think all of us want to certainly help our warriors who have endured injury from the weapons of war, and I want to be sure that we have the right resources for you to be able to do the right things, with the consequences of war. And you seem to have an excellent program. It has momentum. It has demonstrable efficacy. I'd like to have a description of it in more detail, and whether, again, you have the resources to do it.

Admiral NATHAN. Happy to do that.

[The information follows:]

Navy Medicine continues to foster a culture of support for psychological health as an essential component to total force fitness and readiness. Operational Stress Control programs provide sailors, marines, leaders, and families the skills and resources to build resiliency. We also address stigma by encouraging prevention, early intervention, and help-seeking behaviors.

We have made remarkable progress in ensuring our wounded servicemembers get the care they need—from medical evacuation through inpatient care, outpatient rehabilitation to eventual return to duty or transition from the military. Our programs of support, which are adequately resourced, continue to mature and show progress. Our emphasis remains ensuring that we have the proper size and mix of mental health providers to care for the growing need of servicemembers and their families who need care. Within Navy Medicine, mental health professional recruiting and retention remains a top priority.

Our focus continues to be embedding psychological health providers in Navy and Marine Corps units, ensuring primary and secondary prevention efforts, and appropriate mental healthcare are readily accessible for sailors and marines. The U.S. Marine Corps (USMC) Combat and Operational Stress Control program uses Operational Stress Control and Readiness (OSCAR) as an approach to mental healthcare in the operational setting by taking mental health providers out of the clinic and embedding them with operational forces to emphasize prevention, early detection, and brief intervention. More than 5,000 marine leaders and individual marines have already been trained in prevention, early detection, and intervention in combat stress through OSCAR Team Training and will operate in OSCAR teams within individual units.

We are also embedding psychological health providers in the primary care setting where most servicemembers and their families first seek assistance for mental health issues. This practice enhances integrated treatment, early recognition, and access to the appropriate level of psychological healthcare. The Behavioral Health Integration Program in the Medical Home Port is a new program that is actively being implemented across 69 Navy and Marine Corps sites.

Traumatic brain injury (TBI) care on the battlefield has improved significantly since the beginning of Operations Enduring Freedom and Iraqi Freedom. Most improvements have targeted early screening and diagnosis followed by definitive treatment. In 2010, the Department of Defense (DOD) issued the Directive-type Memorandum 09–033, which has resulted in improved diagnosis and treatment of battlefield concussion. For the Navy and Marine Corps, the primary treatment site for concussed servicemembers has been the Concussion Care Restoration Center (CRCC) at Camp Leatherneck in Afghanistan. Since its opening in 2010, CRCC staff have treated more than 930 servicemembers with concussions, resulting in a greater than 98-percent return-to-duty (RTD) rate and an average of 10.1 days of duty lost from point-of-injury to symptom-free RTD. There is also a Concussion Specialty

Care Center (CSCC) at the NATO Role III Hospital in Kandahar, with a neurologist on staff.

Upon return from deployment, enhanced screening methods for TBI and mental health conditions are being piloted at several Navy and Marine Corps sites. These efforts include additional screening and follow-up for any servicemember who was noted to have sustained a concussion in theater. Efforts are underway to increase the use of the National Intrepid Center of Excellence (NICoE) across DOD and Navy, and the development of NICoE satellite sites, to provide state-of-the-art evaluation and treatment for those patients who do not improve with routine clinical care.

Additional examples of support programs throughout Navy Medicine include:

*Overcoming Adversity and Stress Injury Support*.—Overcoming Adversity and Stress Injury Support (OASIS) is a residential post-traumatic stress disorder treatment program at the Naval Medical Center San Diego. It opened in August 2010, onboard the Naval Base Point Loma and is providing intensive mental healthcare for servicemembers with combat-related mental health symptoms from post-traumatic stress disorder, as well as major depressive disorders, anxiety disorders, and substance abuse problems. Care is provided 7 days a week for 1,012 weeks, and servicemembers reside within the facility while they receive treatment.

*Families Over Coming Under Stress*.—Families Over Coming Under Stress (FOCUS) is a family psychological health and resiliency building program that addresses military family functioning in the context of the impact of combat deployments, multiple deployments, and high-operational tempo. The application of a three-tiered approach to care: community education, psycho education for families, and brief treatment intervention for families has shown statistically significant outcomes in increasing family functioning and decreasing negative outcomes such as anxiety and depression in both parents and children. The program serves Active Duty and Reserve families. Families can access the program through a direct self-referral, referrals by military treatment facility providers, community providers such as Fleet and Family Service Centers, chaplains, and schools. There are currently 23 FOCUS locations operating at 18 installations.

*Reserve Psychological Health Outreach Program*.—Reserve Psychological Health Outreach Program (PHOP) was developed for our Navy and Marine Corps Reserve populations. The program provides psychological health outreach, education/training, and resources a 24/7 information line for unit leaders or reservists and their families to obtain information about local resources for issues related to employment, finances, psychological health, family support, and child care. PHOP now includes 55 licensed mental health providers dispersed throughout the country serving on 11 teams located centrally to Navy and Marine Force Reserve commands.

*Returning Warrior Workshop*.—The Returning Warrior Workshop (RWW) is a dedicated weekend designed to facilitate reintegration of sailors and marines returning from combat zones with their spouses, significant others. RWWs are available to all individual augmentees, both Active Duty and Reserve, and are considered the Navy's "signature event" within the Yellow Ribbon Reintegration Program. The RWW employs trained facilitators, including the PHOP teams and chaplains, to lead warriors and their significant others through a series of presentations and tailored break-out group discussions to address post-combat stress and the challenges of transitioning back to civilian life. RWWs assist demobilized servicemembers and their loved ones in identifying and finding appropriate resources for immediate and potential issues that often arise during post-deployment reintegration. As of September 2011, more than 10,000 servicemembers and their families have participated in RWWs. RWWs assist demobilized servicemembers and their loved ones in identifying immediate and potential issues that often arise during post-deployment reintegration.

*Substance Abuse Rehabilitation Programs*.—Navy Medicine maintains a steadfast commitment to our Substance Abuse Rehabilitation Programs (SARPs). SARPs offer a broad range of services to include alcohol education, outpatient and intensive outpatient treatment, residential treatment, and medically managed care for withdrawal and/or other medical complications. We have expanded our existing care continuum to include cutting-edge residential and intensive outpatient programs that address both substance abuse and other co-occurring mental disorders directed at the complex needs of returning warriors who may suffer from substance abuse disorders and depression or post-traumatic stress disorder (PTSD). In addition, Navy Medicine has developed a new program known as My Online Recovery Experience (MORE). In conjunction with Hazelden, a civilian leader in substance abuse treatment and education,

MORE is a ground-breaking Web-based recovery management program available to servicemembers 24/7 from anywhere in the world.

Navy Medicine is committed to connecting our wounded warriors to approved emerging and advanced diagnostic and therapeutic options within our medical treatment facilities and outside of military medicine. We do this through collaborations with major centers of reconstructive and regenerative medicine while ensuring full compliance with applicable patient safety policies and practices. We will continue our active and expansive partnerships with the other Services, our Centers of Excellence, the VA, and leading academic medical and research centers to make the best care available to our warriors.

Senator MIKULSKI. Thank you very much. And thank you, everybody, for what you're doing.

Chairman INOUYE. Thank you.

Senator Murray.

STATEMENT OF SENATOR PATTY MURRAY

Senator MURRAY. Thank you very much, Mr. Chairman.

General Horoho, you and I have had a number of discussions about the invisible wounds of war and the challenges soldiers are facing, seeking behavioral healthcare. And as you well know, Madigan Army Medical Center, in my home State of Washington, is dealing now with how to handle these wounds and provide our soldiers quality consistent care, especially for our soldiers who are going through the Integrated Disability Evaluation System (IDES).

Now, I think some of the issues that have been raised at Madigan are unique to that facility, but I do continue to have a number of concerns, not only about the situation at Madigan today but the implication for our soldiers, really, across the Army who may have also struggled to get a proper diagnosis, adequate care, and an honest evaluation during the integrated disability system process.

I wanted to ask you today, prior to 2007, Madigan did not use the forensic psychiatry to evaluate soldiers in the medical evaluation board process, and wanted to ask you before the subcommittee today, why was that system changed in 2007?

General HOROHO. Thank you, Senator, for the question.

The first thing that I'd like is just pick up on the word, when you said "invisible wounds." I know it has been said during this war that the signature wound is an invisible wound. I would submit that it's not invisible to the family, nor is it invisible to the soldier that is undergoing those challenges, behavioral challenges.

The reason, and I'm guessing on this, Ma'am, because I wasn't there, you know, prior to, but prior to 2007, we were a Nation that entered into war in about 2001, when we were attacked, and 2002 timeframe. And we had a very old system. That was the Medical Hold (MEDHOLD) and the Medical Holdover (MEDHOLDOVER) system, which was two separate systems on how we managed those servicemembers, Active and Reserve component. And that was the system that has been in place for many, many years.

And what we found with the large number of deployments and servicemembers that were exposed to physical wounds, as well as behavioral health wounds is that we found that the Army system was overwhelmed, and that really is what was found in the 2007 timeframe, is that we didn't have the administrative capability as well as the logistical support that needed to be there. And that's why we stood up our warrior transition units.

So, we had a large volume going through the disability process that was an old antiquated process, and we had an overwhelming demand on our Army that we needed to restructure to be able to support and sustain.

Senator MURRAY. But prior to 2007, there wasn't a forensic psychiatry that added an additional level of scrutiny. Is that correct?

General HOROHO. I honestly will need to take that for the record, because I don't know in 2006 if they had forensics or not. So, I can't answer that question for you. I would like to give you a correct answer.

Senator MURRAY. Okay.

General HOROHO. So, if I could take that one for the record.

[The information follows:]

While forensic psychiatry has been in the Army inventory for many years, there was no separate forensic psychiatry department at Madigan Army Medical Center (MAMC) prior to 2007, and they did not provide forensic evaluations in routine disability assessments unless it was determined that a forensic evaluation was specifically required. Forensic psychiatry evaluations are appropriate in civil and criminal legal proceedings and other administrative hearings, as well as independent determinations of specialized fitness for duty issues where the basis of the diagnosis in not clearly determined.

Senator MURRAY. I would appreciate that. And as I mentioned, I am really concerned that soldiers Army-wide have been improperly diagnosed and treated by the Army. What have you found, under your investigation, of soldiers getting incorrect Medical Evaluation Board (MEB)/Physical Evaluation Board (PEB) evaluations at other facilities?

General HOROHO. Ma'am, if I could just, when soldiers are getting diagnosed with post-traumatic stress (PTS) or post-traumatic stress disorder (PTSD), we use the same diagnostic tool within the Army, Navy, and the Air Force, which is the same tool that is used in the civilian sector. So, it is one standard diagnostic tool that is very well-delineated on the types of symptoms that you need to have in order to get a diagnosis of PTS or PTSD.

So, we are using that standard across the board, and we have been using that standard across the board.

Senator MURRAY. Well, we do know now at Madigan there were soldiers that were incorrectly diagnosed. And we're going back through, there's several investigations going on to re-evaluate. And my question is, there's been a lot of focus at Madigan. I'm concerned about that system-wide. And you're doing an investigation system-wide to see if other soldiers have been incorrectly diagnosed. Correct?

General HOROHO. Yes, Ma'am. So, if I can just lay things out and reiterate some of our past conversations. We have one investigation that is ongoing. Actually, it's completed. And it's with the lawyers. That's being reviewed. The Deputy Surgeon General, General Stone, initiated that investigation. And that was to look into——

Senator MURRAY. System-wide?

General HOROHO. No, Ma'am. That's the one at Madigan that's looking at the forensics.

Then, there's another investigation that was launched by the Western Region Medical Command to look into the command climate at Madigan Army Medical Center. And then what I initiated was an Inspector General (IG) assessment, not an investigation,

but an assessment that looked at every single one of our military treatment facilities and the provision of care to see whether or not we had this practice of using forensic psychiatry or psychology in the medical evaluation process.

Senator MURRAY. Okay. Well, my question was whether you had found at other facilities, incorrect diagnosis. And I want you to know that I have asked my Veterans Affairs Committee staff to begin reviewing cases from throughout the country of servicemembers involved in this process, and we are just beginning our review right now. But, we have already encountered cases in which a servicemember was treated for PTSD during their military service, entered the disability evaluation process, and the military determined that the servicemember's PTSD was not an unfitting condition.

So, my concern is the significant discrepancy now between the Army's determination and the VA's finding that the soldier had a much more severe case of PTSD. Now, our review on my subcommittee is ongoing, but besides bringing individual cases to your attention, I wanted to ask you what specific measures do you look at to evaluate whether soldiers are receiving the proper diagnosis, and care, and honest evaluation.

General HOROHO. Within the Army, our role as the physicians is to evaluate the patients, not to determine a disability. So, they evaluate and identify a diagnoses and a treatment plan. And then once that is done, during the treatment, and if they are determined where they need to go into the disability system, then once they're in the disability system, now, because of Integrated Delivery Evaluation System (IDES), that occurred in 2010, they now have that evaluation done by the VA, the compensation exam. That's the compensation and pension (C&P) exam that's done by the VA.

And then they are brought back into the disability system. So, the PEB is actually where the determination for disability is made. That is not a medical. That's an administrative action that falls under our G–1. And so I just want to make sure we don't mix what we do within the medical community in treating and evaluating and what gets done in the disability process that's an administrative process, that is reviewing the evaluation from the VA, and then the evaluation from the medical to determine disability.

Senator MURRAY. My concern is that every single soldier who has mental health disability, PTSD, gets the care that they need, and that they get the support that they need, and they're adequately cared for, whether they leave the service or are sent back overseas, or whatever. So, we're going to continue to look at the system-wide, and as you know, the problems at Madigan were allowed to go on for years, and I'm really concerned that that lack of oversight over the disability evaluation system is much more broad, and really, you're going to be following to see what steps you take to ensure that this process is maintained. Not just at Madigan, where there's a severe focus right now, but nationwide.

General HOROHO. And Ma'am, what we've done so far, since I took over as Surgeon General on the 5th of December, what I've done so far is we're pulling behavior health up to the headquarters level, and making that a service line, so that we have one standard

of care across all of Army Medicine, and we're able then to shift that capability where the demand is.

I've got a team that has developed clinical practice guidelines for the use of forensics, as well as clinical practice guidelines for implementation of behavior health capability across Army Medicine.

Senator MURRAY. When will that be implemented?

General HOROHO. Those are, right now, being evaluated by the experts. So, we've had them written up, and now they're being evaluated, and then we'll get that rolled out probably within the next several weeks.

Senator MURRAY. Okay. So, we have two issues. We need to go back and find every soldier that may have not gotten the proper diagnosis and evaluation, and we need to move forward quickly to make sure there is the same diagnostic tool moving nationwide.

General HOROHO. Ma'am, right now, we are using the same diagnostic tool as my Air Force, and Navy, and the civilian sector for evaluating PTSD.

Senator MURRAY. Do you believe we're using the right diagnostic tools?

General HOROHO. It's the one standard that's out in the civilian sector as well as the military. It is the best standard that's out there for diagnosing.

Senator MURRAY. Okay. And finally, I just wanted to ask you, in your testimony you said that you've created a taskforce within the Army to examine the IDES process in conjunction with the ongoing MHS efforts. What specific aspects of the IDES process are you reviewing?

General HOROHO. Yes, Ma'am. We did this first, from an Army perspective. So, prior to General Crowley leaving, we set up a taskforce that Brigadier General Lyon, who is a medical corps physician, Army, he led that, and that was with U.S. Army Forces Command (FORSCOM), the G–1, and as well as Army Medicine. So we had a collaborative process looking at every aspect within the IDES to ensure that we had metrics, and as well as standards across implementation throughout the IDES process.

After that was done, we then stood up an Army Medicine taskforce to be able to look at it then, Deepdive, from the medical piece that we're responsible for. Brigadier General Williams led that taskforce. It was multifunctional in capability. Individuals with multiple capabilities sat on that. And what we want to do is to be able to launch our standards across, so that we have no variance in every place that we have soldiers that are going through the IDES process.

Army is getting ready to put out an all Army activities (ALARACT) message Army-wide with the standard. That will be going out, I think, in the April timeframe. And then ours, we're ready now. As soon as the Army launches that, we'll be able to put our standards in that impacts our medical care.

Senator MURRAY. When will this be complete?

General HOROHO. Ma'am, right now, we're looking at starting that in the April timeframe, and the rollout of those standards across. And so I can get back with you on how long that would take.

[The information follows:]

The Army issued DA EXORD 080–12 on February 17, 2012 which provides guidance for standardization of Integrated Disability Evaluation System (IDES) across the Army. The U.S. Army Medical Command subsequently issued MEDCOM OPORD 12–33 which operationalizes three main efforts to:

—standardize the process;

—build capacity; and

—establish Soldier-Commander responsibilities.

From 2007 to 2011, the Army deployed IDES across the force to 32 sites and continue efforts to implement new IDES guidance.

Senator MURRAY. Okay. I'd really appreciate that.

General HOROHO. I can tell you that my full focus is ensuring that we do have a system, and I believe that everyone is focused on caring for our warriors. We're very committed to that. And we're looking at everywhere where we have variance, so that we can decrease that variance, and be able to ensure that we have one standard across Army Medicine.

Senator MURRAY. Well, thank you very much. Thank you to your attention to this.

Mr. Chairman, this is a serious issue. I've sat and talked with numerous soldiers and families who were diagnosed with PTSD, were getting care, and then as they went through the MEB process, were told they didn't have PTSD. They're now out in the community, and it is tragic that they're not getting the care that they need, and certainly, for the families, this has been extremely stressful, and my major attention on this, and my Veterans Affairs Committee is looking at this system-wide, and we'll continue to work with you on this.

Chairman INOUYE. I'm certain the troops and the veterans are very grateful to you. Thank you very much.

Admiral Nathan, General Green, and General Horoho, thank you very much for your testimony, and more importantly, thank you for your service to our Nation.

General HOROHO. Thank you, Sir.

Chairman INOUYE. Thank you very much.

General HOROHO. Thank you very much. Thank you.

Admiral NATHAN. Thank you, Sir.

General GREEN. Thank you.

Chairman INOUYE. I'd like to call the next panel, the panel of nurses. I'd like to welcome Major General Kimberly Siniscalchi, the Assistant Air Force Surgeon General for Nursing Services; Rear Admiral Elizabeth Niemyer, Director of the Navy Nurse Corps; and Major General Jimmie Keenan, Chief of the Army Nurse Corps.

Needless to say, I've had a great love for nurses throughout my life. They have a very special spark. And so I look forward to your testimony, sharing with us the accomplishments of your corps, also the vision for the future, and problems, if any.

So, may we begin with General Siniscalchi?

**STATEMENT OF MAJOR GENERAL KIMBERLY A. SINISCALCHI, ASSISTANT AIR FORCE SURGEON GENERAL FOR NURSING SERVICES**

General SINISCALCHI. Chairman Inouye, thank you for your continued support of military nursing and for the opportunity to once again represent more than 18,000 men and women of our total nursing force. Sir, I am honored to report on this year's outstanding achievements and future initiatives.

This past year, more than 1,100 nursing personnel deployed in support of global contingency operations, comprising 47 percent of all Air Force medical service deployers. The transition from Operation Iraqi Freedom to Operation New Dawn brought many of our troops home. Joint Base Balad Theater Hospital closed as part of this transition, marking the end of an era.

A team of our deployed medics had the honor of retiring the historic American flag that covered Balad's Heroes Highway, the entry that welcomed more than 19,000 wounded warriors into our care. As this flag, which offered hope to our wounded, was taken down, the medics stood in awe as they discovered the stars from the flag were forever imprinted on the roof of the tent covering Heroes Highway.

Our mission continues in support of Operation Enduring Freedom. This year, we introduced the tactical critical care evacuation team concept and piloted the first team for inter-theater transport. Consisting of an emergency room physician and two of our nurse anesthetists, this team moved 122 critical patients, providing advanced interventions early in the patient care continuum, and we now have five teams trained.

This past year, critical care air transport and air medical evacuation teams safely moved 17,800 patients globally. Our efforts to advance research and evidence-based practice led to new initiatives improving safe patient handoff and pain management. To continue building the next information bridge, we field tested a new electronic health record during air medical transport missions. All documented en route care can now be downloaded into the same clinical database used by our medical facilities, and can be readily visible to medical teams around the globe.

Based on lessons learned over the past 10 years, we completely transformed our air medical evacuation training into a more efficient modular format, with increased proficiency levels, based on the latest evidence-based clinical protocols. This new curriculum reduced overall training time by 130 days.

As we face current challenges, our total nursing force is well-prepared. We've established amazing partnerships with Federal and healthcare facilities whose in-patient areas and acuity levels provide the optimal environment for initial clinical training and skill sustainment. This year, we processed 39 training affiliation agreements in nursing. We also established three new 12-month fellowships: Patient safety, in partnership with the Tampa James Haley VA Patient Safety Center; magnet recognition, in partnership with Scottsdale Healthcare system; and Informatics, at our Air Force Medical Operations Agency.

This year, we launched our new Air Force residency program, aligning with the National Council of State Boards of Nursing. Our newly assessed novice nurses complete the nurse transition program, and upon arrival at their first duty station enter the nurse residency program, where they receive clinical mentoring and professional development through their first year of practice.

Whether on the battlefield or at home, our nurses and technicians are well-prepared to provide world-class care to all beneficiaries. The Federal Nursing Service chiefs have partnered in building collaborative plans to better prepare nursing teams for

their integral roles in providing better health, better care, best value.

Patient-centered care is our highest priority, and high touch, high care remains our true north. As we continue the journey from healthcare to health, we are committed to improve continuity of care, enhanced resiliency, and promote safe healthy lifestyles.

With support from the Tri-Service Nursing Research Program (TSNRP), our nurse scientists completed research in the areas of patient safety, post-traumatic stress, pain management, and women's health. These research initiatives demonstrate our commitment to advanced nursing practice by fostering a culture of inquiry.

However, an ongoing challenge is retaining our clinical experts. In an effort to explore factors affecting retention, the Uniform Services University, of the Health Sciences, conducted a study and found the number one reason influencing a nurse's decision to remain on Active Duty was promotion. The survey findings support our continued efforts to balance the Nurse Corps grade structure. Although our nursing retention rates have improved with incentive special pay program, and we've had continued success in meeting our recruiting goals, we must continue every effort to increase fill-grade authorizations in order to promote and retain our experienced nurses.

PREPARED STATEMENT

Mr. Chairman, Mr. Vice Chairman, we genuinely appreciate your support as we continue to deliver world-class healthcare anytime, anywhere. We strive to ensure that those who wear our Nation's uniform and their families receive safe, expert, and above all, compassionate care.

Again, I thank you, and I welcome your questions.

[The statement follows:]

PREPARED STATEMENT OF MAJOR GENERAL KIMBERLY A. SINISCALCHI

Mr. Chairman and esteemed members, it is indeed an honor to report to the subcommittee on this year's outstanding achievements and the future initiatives of the more than 18,500 members of our Total Nursing Force (TNF). I am proud to introduce a new team this year—Brigadier General Gretchen Dunkelberger, Air National Guard (ANG) Advisor; Colonel Lisa Naftzger-Kang, United States Air Force Reserve (USAFR) Advisor; and Chief Master Sergeant Cleveland Wiltz, Aerospace Medical Service Career Field Manager.

I extend, on their behalf and mine, our sincere gratitude for your steadfast support, which has enabled our TNF to provide world-class healthcare to more than 2 million eligible beneficiaries around the globe. Throughout the past year, Air Force nursing personnel have advanced the transition from healthcare to health through patient education, research, and evidence-based practice. Our TNF priorities are:

—Global Operations;
—Force Development;
—Force Management; and
—Patient-Centered Care.

Woven through each of these areas are new initiatives in education, research, and strategic communication. Today, my testimony will highlight the accomplishments and challenges we face as we pursue our strategic priorities.

GLOBAL OPERATIONS

Operation Iraqi Freedom has now drawn to a close, and yet our medics remain fully engaged in wartime, contingency, humanitarian peace-keeping, and nation-building missions. In 2011, we deployed more than 1,100 nurses and technicians in support of these global missions. Our TNF made up approximately 47 percent of all Air Force Medical Service (AFMS) deployed personnel.

The transition from Operation Iraqi Freedom to Operation New Dawn brought many of our troops home to friends and family. Joint Base Balad Theater Hospital closed in November 2011 as a part of this transition. During its tenure, more than 7,500 Air Force medical personnel deployed to Balad, approximately 50 percent of whom were nursing personnel. This premier trauma hospital supported more than 19,000 admissions, 36,000 emergency patient visits, and 20,000 operating room hours while sustaining a 95 percent in-theater survival rate, the highest in military medical history. Serving as the last Deputy Group Commander, Chief Nurse, and Medical Operations Commander, during the final rotation at Balad, was my USAFR Advisor, Colonel Naftzger-Kang. She and her team successfully executed end-of-mission planning and the transition of $335,000 in equipment and more than 90 personnel with facility on-time closure.

Balad's closure marked the end of an era and was bittersweet for all those who had journeyed through the hospital doors. The final rotation had the honor of retiring the American flag that covered Heroes Highway, the entry that welcomed our wounded warriors into our care. As the flag was taken down, our nurses and medics stood in awe as they discovered that the stars from the flag were imprinted on the roof of the Heroes Highway tent. This flag, which offered hope to thousands of wounded soldiers, sailors, marines, and airmen, will be proudly displayed at the new Defense Health Headquarters, Falls Church, Virginia.

No matter the setting, high-touch, high-care remains the True North of the TNF. When a soldier, who was severely injured by an improvised explosive device (IED) blast first awoke in the intensive care unit (ICU), at Craig Joint Theater Hospital, Bagram, his first concern was not for himself but for his military working dog, also injured in the blast. The soldier was being prepared for evacuation to Germany; he knew his dog would be distraught if separated from him. Recognizing the importance of this soldier's relationship with his dog, Captain Anne Nesbit, an Air Force Critical Care Nurse, went above and beyond to reunite them. She spearheaded efforts to bring the dog to his bedside. The dog entered the ICU and immediately jumped on to the soldier's bed and curled up next to his master. Those who witnessed this reunion were brought to tears. Even in the midst of war, the nurse's compassion is never lost.

Our medical technicians continue to deploy with our Army partners to Afghanistan as convoy medics to provide world-class healthcare at forward operating locations. One example, is Senior Airman Jasmine Russell, a medical technician assigned to a Joint Expeditionary Tasking as a logistics convoy medic with the Army. She traveled with her battalion more than 80,000 miles throughout 40 districts and completed more than 450 convoys in the Regional Command Southwest, Afghanistan. On January 7, 2011, while north of the Helmand Province, her convoy encountered 17 IEDs, 3 small arms fire attacks, and 2 missile attacks, killing a local national, and injuring coalition forces assigned to the convoy. Despite being injured, this junior enlisted member acted far beyond her years of experience as she began immediate triage and care, preparing the wounded for evacuation. Senior Airman Russell stated, "I wasn't even concerned about myself; my peers were my number one priority."

While initial stabilization and surgery occurs at forward locations close to the point of injury, casualties must be aeromedically evacuated for further care. In wartime, contingency, peacetime, and nation-building, our aeromedical evacuation (AE) crews and Critical Care Air Transport Teams (CCATT) continue to provide world-class care and champion advancements in enroute nursing practice. This past year, AE moved 17,800 patients globally, with 11,000 from within United States Central Command alone. Since the start of Operations Enduring and Iraqi Freedom more than 93,000 patients have been safely moved.

In 2011, we introduced the Tactical Critical Care Evacuation Team (TCCET) concept and piloted the first team in Afghanistan. Lieutenant Colonel Virginia Johnson, a certified registered nurse anesthetist (CRNA), stationed at Langley Air Force Base (AFB), Virginia, led the way in closing the gap in enroute care from initial surgical intervention to the next level of hospital care. Lieutenant Colonel Johnson and Captain Alejandro Davila, also a CRNA, took to the sky in a UH–60 Helicopter. This Air Force team of two CRNAs, and an emergency room physician moved 122 critical patients, and provided state-of-the-art enroute care. In May 2012, the Air Force will deploy two more TCCETs into Afghanistan.

This past year, the Air Force field-tested a new electronic health record (EHR) during AE missions. Our AE crews carried laptop computers, which facilitated documentation and downloading of enroute care into the same clinical database used by our medical facilities, and allowed all care provided to be readily visible to medical teams around the globe. This capability is fully operational for AE missions between Bagram and Ramstein Air Base (AB), Germany. Our teams continue to build the

next information bridge by adding this capability to AE missions departing Ramstein AB enroute to Andrews AFB, Maryland and Lackland AFB, Texas.

Air Force nursing leaders are also filling critical strategic roles in the joint operational environment. Colonel Julie Stola, the Command Surgeon for U.S. Forces-Afghanistan, was instrumental in the implementation of the Central Command's mild traumatic brain injury (TBI) training and tracking procedures for the Combined Information Data Network Exchange Database. As the theater subject-matter expert on the use of EHR for servicemembers involved in blast exposures, her exceptional leadership and guidance to users resulted in an increase of blast exposures documentation from 35 to 90 percent in 2011.

An Air Force nursing priority for 2011 was to further advance research and evidence-based practice initiatives to improve patient safety and pain management during AE transport. Lieutenant Colonel Susan Dukes at Wright Patterson AFB, Ohio and Major Jennifer Hatzfeld at Travis AFB, California, are working closely with medical teams at Air Mobility Command and leading efforts to evaluate the effectiveness of these safety initiatives and enroute pain management strategies. A team of our nurse scientists recently completed a project entitled "Enhancing Patient Safety in Enroute Care Through Improved Patient Hand-Offs." Major Karey Dufour, is member of this team, she will also be our first graduate from the Flight and Disaster Nursing Master's program at Wright State University, Ohio. She used this study as her Capstone project. One aspect of this research project was the development of a standardized checklist to facilitate communication during the preparation of patients for AE transport and at each patient hand-off. Pilot testing of this checklist demonstrated an improvement in the safety and quality of care throughout the AE system. Implementation of the checklist is ongoing across the AE community.

In our effort to optimize pain management of patients transitioning between ground and air, an in-depth review of care standards and safety was performed. As a result, all AE crews were trained in caring for patients receiving epidural analgesia. This advanced intervention ensures optimal pain management as patients move through the continuum of care. Major Hatzfeld, Lieutenant Colonel Dukes, and Colonel Elizabeth Bridges, USAFR, are currently evaluating patient outcomes from those who have received pain management through epidural analgesia and peripheral nerve blocks within the AE environment.

Our global AE force remains dynamic; 16 additional crews were added to the Active Duty inventory to support global requirements. The AFMS responded by actively recruiting new AE members. More than 75 exceptional medics stood up to the challenge and joined the AE team. Aeromedical Evacuation Squadron (AES) manning levels are at the highest rate since the beginning of the war, with flight nurses at 89 percent and AE technicians at 85 percent.

Another accomplishment this year was a major transformation of our AE training. The goal was to incorporate lessons learned from AE missions and the latest clinical protocols. We increased focus on evidence-based care, patient outcomes, safe patient hand-off, pain management, enroute documentation, and raised overall training proficiency levels. Currently, the Line of the Air Force Operations community is building a formal training unit (FTU) to be co-located with the United States School of Aerospace Medicine at Wright-Patterson AFB, Ohio. This FTU will focus on enhancing the knowledge and performance required to operate in our AE aircraft. The new modularized curriculum and the relocation of the FTU will reduce overall training time by 130 days, provide flexibility in completing the training requirements, eliminate redundancies, and save thousands of dollars in travel costs. More importantly, this initiative will standardize training across the TNF, better preparing our AE community for any operational mission.

In 2011, our strategic AE mission from Ramstein AB, Germany expanded as San Antonio, Texas was added as an additional destination for our returning wounded warriors. This new aeromedical staging facility (ASF) capitalizes on the available capacity and specialty care provided at the San Antonio Military Medical Center. It also allows wounded warriors from that region to be closer to their unit, friends, and family as they recover. The ASF staff of 57 airmen is a seamless team of Active Duty, Reserve, and Guard personnel.

While we are learning, we are also sharing the knowledge of AE execution with our global partners. Our International Health Specialists are key to building global partnerships and growing medical response capabilities. As subject-matter experts, they are part of a team that directs training and education to improve healthcare infrastructure and disaster response. Staff Sergeant Amber Weaver, an Aeromedical Evacuation Technician with the 187th, AES, Wyoming, ANG, expressed her enthusiasm as a member of a team that provided AE training for the Democratic Republic of the Congo (DRC) Air Force. Her hope is that the Congolese military medical per-

sonnel will apply the training she provided to help their wounded. Lieutenant Jodi Smith, a flight nurse with the same unit, stated, "The goal was to teach the DRC's quick response force how to safely aeromedically evacuate their patients." The Congolese training staff noted that this effort definitely strengthened the partnership and cooperation between the United States and the Congolese.

Continuing around the globe, our Joint and coalition partnerships were never more evident than on March 11, 2011, when a 9.0 earthquake and tsunami caused catastrophic damage along the eastern coast of Japan. This event also posed a potential radiological threat from extensive nuclear plant damage. In support of Operation Tomodachi, Air Force medics assisted air crews with six passenger transport missions, resulting in the safe movement of 26 late term pregnant females and their 40 family members to the U.S. Naval Hospital, Okinawa, Japan.

Another example of our international involvement took place in Nicaragua where this year 50 Air Force Reserve medics from the 916th Aerospace Medicine Squadron, Seymour Johnson AFB, North Carolina, provided medical care to more than 10,000 local citizens during their Medical Readiness Training Exercise (MEDRETE). Each day began at 4 a.m., with hundreds of patients lining the roadway to the medical site, waiting to be seen by this team. Some patients traveled for hours on horseback, while others had walked countless miles in the August heat with their families in tow. Lieutenant Colonel Dawn Moore, commander of the MEDRETE mission stated, "We are proud to collaborate with other countries and provide excellent medical care, as well as build international capacity."

Air Force nursing continues to be vital in their role as educational and training instructors for the Defense Institute for Military Operations (DIMO) in their efforts to build global partnerships and capacity. An example of educational impact was from an Iraqi Air Force Flight Nurse who reported that 78 lives were saved by Iraqi Air Force AE teams, just months after completing the Basic Aeromedical Principles Course. In another example, 10 soldiers were badly injured during an insurgent conflict west of Nepal. The follow-on forces that came to their relief the next morning were astonished when they found the badly wounded soldiers alive as a result of applying the self-aid and buddy-care techniques they learned in the DIMO First Responders Course. The DIMO medical training missions are making a profound difference in patient outcomes.

These critical partnerships grow not only through formal training and joint exercises but also through international professional forums. In 2011, we partnered with our nursing colleagues from Thailand and co-hosted the 5th Annual Asia-Pacific Military Nursing Symposium. The theme, "Asia-Pacific Military Nursing Preparedness in Global Change," reinforced partnerships to enhance nursing response to pandemics and humanitarian crises, and to advance evidence-based nursing practice. Twelve countries participated, more than 20 international colleagues briefed, and more than 30 presented research posters. During this conference, the focus on joint training initiatives in disaster response and aeromedical evacuation proved to be critical when Thailand experienced severe flooding, which impacted more than 13 million people and resulted in 815 deaths. The very concepts discussed during the symposium were later applied during the rapid deployment and establishment of an Emergency Operations Center and successful aeromedical evacuation of patients. We look forward to continuing to build our international Asia-Pacific nursing partnerships as we prepare to co-host the 6th annual conference in 2012.

FORCE DEVELOPMENT

It is imperative our TNF possess the appropriate clinical and leadership skills for successful execution of our mission. We are excited to announce three new fellowships:

—Magnet Recognition;
—Informatics; and
—Patient Safety.

The Magnet Fellowship provides the AFMS with a rare opportunity to gain first hand, up-to-date insights into the Magnet Culture; an environment that promotes nursing excellence and strategies to improve patient outcomes. Our Magnet Fellow will spend 1 year at Scottsdale Healthcare System, Arizona, a nationally recognized Magnet healthcare facility and one of our current Nurse Transition Program (NTP) Centers of Excellence (CoE). The Magnet Fellow will assume a consultant role to integrate Magnet concepts across the AFMS.

The Informatics Fellowship is critical to prepare nurses to participate in the development and fielding of computer-based clinical information systems, such as the EHR. Nursing is a major end-user of these electronic information systems and

should be actively involved in the development of requirements to enhance patient safety, communication, seamless patient handoff, and ease of documentation.

The Patient Safety Fellowship is a new partnership with the Veterans Administration (VA) at the James A. Haley VA Patient Safety Center of Inquiry in Tampa, Florida. The Fellow will learn how to design and test safety defenses related to the patient, healthcare personnel, technology, and organization, to export evidence into practice, and facilitate patient safety and reduce adverse events. This fellowship is designed to prepare nurses to lead interdisciplinary patient safety initiatives.

In last year's testimony, we previewed our plan to consolidate the NTP training sites in order to provide a more robust clinical experience. We established four CoE:

—Scottsdale, Arizona;
—Tampa, Florida;
—Cincinnati, Ohio; and
—San Antonio, Texas.

Our data shows NTP CoE offer many opportunities to practice a variety of clinical skills in an environment with a large volume of high-acuity patients, which allows us to confidently decrease our program length from 77 to 63 days. Additionally, the resulting 19 percent improvement in training efficiency allowed us to reduce NTP course instructors by 40 percent thus returning experienced nurses to the bedside.

In response to the National Council of State Board of Nursing Transition to Practice (TTP) Initiative and the Institute of Medicine Future of Nursing recommendations, we have initiated a residency program to develop our novice nurses. Beginning in September 2011, all novice nurses entering Active Duty were enrolled in the new Air Force Nurse Residency Program (AFNRP). In the AFNRP, carefully selected senior nurses mentor novice nurses through their transition from nurse graduate to fully qualified registered nurse. We were pleased to discover that 80 percent of the TTP recommended content was already incorporated into the nurses' orientation during the first year of military service, allowing us to focus our efforts on weaving the remaining content such as evidence-based practice, quality, and informatics, into the AFNRP.

One of the desired outcomes of the NTP and AFNRP is enhanced critical thinking skills. Using a validated assessment tool in a pilot study, we found a significant increase in the critical thinking skills of nurses who completed the NTP. We expanded this assessment to systematically evaluate the effectiveness of the NTP and AFNRP. We gathered representatives from these CoE to reflect on successes of these military and civilian partnerships and to discuss the way ahead.

Another area where we are working to further develop our nurses is through our Critical Care Fellowship. We identified opportunities to enhance efficiencies of this training program. After extensive research on civilian and military programs, we recommended reduction from three training locations to two and initiated a review of curriculum to standardize the didactic and clinical experiences. Additionally, we are exploring civilian training partnerships which may give our students the opportunity to work with a greater volume of high-acuity patients.

Our new mental health course is an example of our success in advancing our practice through education and training. Based on the changing needs of the mental health community, and in response to the National Defense Authorization Act, we are incorporating outpatient mental health case management training for our mental health nurses.

Advanced Practice Nurses are central to the success of a clinical career path that promotes optimal patient outcomes through critical analysis, problem solving and evidenced based decisionmaking. Building on last year's initiatives, we continue to work with our Sister Services and the Uniformed Services University of the Health Sciences (USUHS) Graduate School of Nursing (GSN) to launch a Doctorate of Nursing Practice (DNP) program. This year, the Air Force has selected five Psychiatric Mental Health Nurse Practitioner (PMHNP) DNP students and three Doctor of Philosophy students for enrollment in the USUHS GSN. In addition, we also have developed a transition plan to meet the advanced practice doctoral level requirements for our Family Nurse Practitioner and Certified Registered Nurse Anesthetist by 2015.

In 2011, we moved forward with efforts to clearly define the roles of the Clinical Nurse Specialist (CNS), Master Clinician, and Master Nurse Scientist. As part of this endeavor, we discovered significant variance in the definition and expected educational preparation of the CNS. Standardization of qualifications for the title "Clinical Nurse Specialist" were determined to be paramount for us to match qualified nurses with designated positions. As a result, the Air Force Nurse Corps Board of Directors (BOD) approved a standard definition for CNS and standard qualifications in seven areas of practice. A special experience identifier (SEI), for the CNS, was approved by the Air Force Personnel Center (AFPC). This SEI allows us to clearly

identify our CNSs and streamline the assignment process to fill these critical CNS requirements. Additionally, the BOD approved standard definitions and qualifications for the Master Clinician and Master Nurse Scientist.

A new AFMS regulation governing anesthesia delivery by Air Force CRNAs was published this year, recognizing their full scope of practice. This change reflects the recommendations from the 2010 Institute of Medicine report, "The Future of Nursing: Leading the Change, Advancing Health", stating that nurses should practice to the full extent of their education and training. The president of American Association of Nurse Anesthetists, Dr. Debra Malina, CRNA, DNSc commended the Air Force for making this change.

One of our ongoing challenges is to optimize clinical training. It is imperative that our nurses and medical technicians maintain proficiency in their clinical skills not only for contingency operations but also for peacetime operations. We continue to advance our partnerships with other Federal and civilian medical facilities whose inpatient platforms and acuity levels provide the optimal environment for initial specialty development and skill sustainment. We have partnered with several civilian medical centers, as well as universities. In these partnerships, both civilian institutions and military facilities host each other's students and optimize educational opportunities available in each setting. This year, the AFMS processed 180 training affiliate agreements. Of these agreements, 39 were in nursing. These partnerships are vital to our training platforms and promote professional interaction.

As we strive to obtain efficiencies in Joint training, we are reviewing our electronic and virtual distant learning systems for ways to reduce redundancies within the Military Health System. This year, the Joint Health Education Council (HEC) facilitated shared access of 232 training programs between the DOD and the VA. In 2011, more than 113,000 DOD and VA personnel accessed these sites representing more than 800,000 episodes of training. We continue to be an active participant on the HEC. Our involvement in this council is crucial, as a significant number of training programs are nursing related.

In last year's testimony, I spoke of the opening of the Medical Education and Training Campus (METC). I can now share a few of METC's successes in 2011. METC reached full operational capability on September 15, 2011, and was recognized nationally for it's accreditation process which earns METC graduates transferable college credits. Our additional ability to support the medical enlisted educational mission will foster international partnerships, and contribute to educational research and innovation.

We are constantly seeking ways to develop our enlisted medics. In 2011, we selected two airmen to attend the Air Force Institute of Technology for graduate education in Information Resource Management and Development Management. The most recent graduate of the Development Management program, Master Sergeant Carissa Parker, lauded this program and stated, "This is by far, one of the most exciting and unexpected opportunities I've had in my Air Force career. This advanced academic degree allows me to apply the unique knowledge and skill set to best serve my Air Force." In order to align candidates for success in these programs, we continue to actively force develop our enlisted personnel.

Deliberate development of our civilian nursing personnel is ongoing. This year, we established a career path from novice to expert, which offers balanced and responsive career opportunities for our civilian nurses. We finalized two new tools, a civilian career path and a mentoring guide, to aid supervisors, both have been distributed Air Force wide. In January 2012, we conducted our second Civilian Developmental Board at AFPC, where civilian Master Clinician positions were laid in to allow for career progression and much-needed continuity in our military treatment facilities. Our next step is a call for candidates to outline the criteria and assist our civilian nurses in applying for these targeted positions, which will ultimately enhance patient care and job satisfaction.

## FORCE MANAGEMENT

The Air Force continues to be successful with recruiting. In 2011, we met our recruiting goal as we accessed 113 fully qualified nurses and 46 new nursing graduates. This brought our overall end strength to 95 percent. Our flagship programs for recruiting, the Nurse Accession Bonus and the Health Professions Loan Repayment Program, remain the primary vehicles for recruiting the majority of our entry-level nurses. This year we executed 35 accession and 89 loan repayment bonuses. Other accession pipelines include the Reserve Officer Training Corps scholarship program, the Nurse Enlisted Commissioning Program, and the Health Professions Scholarship Program.

Nurse Corps retention rates have improved with the implementation of the Incentive Special Pay Program, allowing the AFMS to retain high-quality skilled nurses in targeted clinical specialties. Overall, retention has risen 13 percent since 2008 and now stands at 80 percent at the 4-year point. Historically, we found retention drops precipitously, by at least 44 percent, at the 10-year point.

In an effort to explore factors affecting retention, USUHS conducted a triservice nursing study. The total sample size was 2,574 with an overall response rate of 30 percent. The results were released in January 2012. Significant factors found to influence a nurse's decision to remain on Active Duty were promotion, followed by family relocation. Overall, deployments were not a significant decision factor in determining intent to remain in the service. Most nurses were happy to deploy and saw this as part of their patriotic duty. Noteworthy comments from the study were, "the promotion rates in the Nurse Corps are behind the rest of the Service" and "the reason for my consideration for leaving military is due to lack of promotion." Other findings, specifically related to promotion opportunity, confirmed our understanding of the grade imbalance within the Air Force Nurse Corps structure.

Over the past few years, the Air Force Nurse Corps has worked with the Office of the Deputy Chief of Staff, Manpower, Personnel, and Services, to provide consistent career opportunities for Nurse Corps Officers as intended by the Defense Officer Personnel Management Act (DOPMA). DOPMA grade tables are applied to the entire Service, not to a specific competitive category, so the challenge for the Air Force Nurse Corps is a lack of sufficient field grade authorizations for the clinical and scientific experience needed. The addition of the CNS and Master Clinician at the bedside, both of whom are educated to the masters or doctoral level has been crucial in providing the education and experience needed in the patient care arena. There is a positive correlation between advanced nursing education and experience as it relates to clinical outcomes and safety.

In a continued partnership with the Office of the Undersecretary of Defense, Personnel and Readiness, and the Assistant Secretary of the Air Force, Manpower and Reserve Affairs, we continue to pursue ways to alleviate deficits in field grade authorizations. Our goal is to improve retention of the uniquely trained experienced military nurse and increase return on investment for advanced education.

During 2011, we made significant strides in strategic communication. We launched the official Air Force Nurse Corps Web site and social network page. Our social network page has received more than 250,000 visits since inception. These Web pages are excellent recruiting and retention tools, and serve as a means to reach out to our retirees as well as the military and civilian community. In addition to the public domain, we have a targeted intra-net capability. The Knowledge Exchange (Kx) is a phenomenal information resource for all Air Force military members and Government employees to assist them with professional development at any level in their career. We launched a Kx subscriber campaign this year, highlighting the large amount of information available on this site. The number of subscribers increased 500 percent. The Kx is a venue where our nurses and medical technicians can share best practices, innovative suggestions, personal stories, accomplishments, and stay connected.

PATIENT-CENTERED CARE

Patient-centered care is at the core of all we do; it is our highest priority. Care for our patients crosses into both inpatient and outpatient arenas, and has been redefined with a more focused emphasis on providing healthcare to promoting health.

An important contribution of nursing to healthcare is exemplified by the integral role of Disease and Case Managers in our Family Health Initiative. For example, at Moody AFB, Georgia, the nurses initiated disease management interviews with their diabetic patients. The nurses used motivational interviews, a face-to-face approach, enabling them to provide education, support, and individual goal setting. This innovative strategy increased accountability for the patient and medical team, and resulted in marked improvement in adherence to the treatment plan and control of the patient's disease process.

Overall, care case manager (CCM) interventions have been found to mitigate risk. Major Don Smith, Health Care Integrator, and Director of Medical Management, Keesler AFB, Mississippi, implemented a process improvement for the identification of wounded warriors as they entered the healthcare system and enrollment of these individuals with a CCM. This initiative increased the communication and person-to-person transfer of care between facility case managers at Keesler, the VA, and Gulfport Naval Station. Additionally, Major Smith orchestrated CCM services for vulnerable populations to include military retirees, Medicare, and Medicaid patients who are eligible for care on a limited basis at Keesler, but who are at risk for frag-

mented care as they transition across the healthcare system. Finally, he designed a "Medical Management Database" consisting of a comprehensive set of CCM documentation tools and tracking methods for patient volume and acuity. The database captures workload, quantitative, and qualitative outcomes. The use of this database improved CCM metrics and decreased documentation workload by 200 percent. Specific outcomes such as avoidance of emergency room visits, hospital admissions, or clinic visits were assigned a corresponding and substantiated dollar amount. The return on this investment exceeded savings of $1.1 million in 2011. This database tool is currently being implemented Air Force wide.

The TBI clinic at Joint Base Elmendorf-Richardson, Alaska is advancing care for wounded warriors. This only Air Force led TBI clinic, offers wounded warriors comprehensive care, including specialized neurological assessment and testing, mental health services, pain management, and the creation of a tailored treatment plan.

Our partnership with the VA through our Joint Ventures has yielded improvements with staffing, efficiencies, and patient outcomes. One of the most recent Joint initiatives was the formation of a peripherally inserted central catheter (PICC) team from the 81st Medical Group, Keesler AFB. In the past, VA patients needing central line intravenous access were transported to Keesler for the procedure. The PICC team now travels to the VA to perform this procedure; resulting in significant cost savings associated with patient care. More importantly, patients who are too unstable for safe transport can now receive the best care in a timely manner at their bedside. Also, at the 81st Medical Group, a team of VA and military staff assisted with more than 1,500 cardiac catheterizations in 2011.

The Joint Venture working group at Elmendorf determined there was a lack of continuity of care and sharing of medical information with the VA clinic for follow-up when VA patients were discharged from the ICU. This working group developed a process by which the ICU discharging nurse contacts the VA CCM to provide an up-to-date medical history to include medication reconciliation and discharge summary. This endeavor has assured that the Primary Care Provider has the most current medical information available at the follow-up appointment. In addition, a template was developed for primary care staff to track all the required medical documentation for patients being discharged from the Joint Venture ICU. This process was replicated at the Medical Specialty Unit.

Embedded in our patient-centered care is an emphasis on resilience. The Air Force is committed to strengthening the physical, emotional, and mental health of our airmen and their families. We continuously reinforce the need for our airmen to bolster their ability to withstand the pressures of military life. Our Air Force understands that we can only be successful when the entire Air Force Community promotes the importance of resilience and early help-seeking by all airmen in distress. We continue efforts to diminish the negative connotation associated with seeking help. All airmen need to perceive seeking help as a sign of strength, not a sign of failure.

We have persevered in our campaign spearheaded by leaders, who themselves have suffered post-traumatic stress, and have come forward to openly discuss their experiences and encourage others to get the care they need from the many support services available. These leaders emphasize that their decision to seek care did not adversely affect their Air Force career; rather receiving care, made it possible for them to continue to be successful. During our nursing leadership symposium this year, one of our senior nurses presented her own personal, traumatic experiences to the audience and described what brought her to the point where she recognized the need to seek mental healthcare. Mental Health professionals were in attendance and conducted on-site discussion groups for medics with similar experiences. Feedback from those who attended the groups was overwhelmingly positive.

Air Force Nurse Scientists are conducting research to enhance the resilience of our servicemembers and their families. For example, Colonel Karen Weis, Director of Nursing Research, Lackland AFB, Texas with support from the TriService Nursing Research Program, is studying an innovative strategy using maternal mentors to build family resilience. Lieutenant Colonel Brenda Morgan, a recent USUHS graduate, identified psychological exercises that can be integrated into a daily routine to enhance resilience. We continue to seek avenues that build a resilient force, identifying at-risk airmen and treating those in need of help.

## ADVANCING A CULTURE OF INQUIRY

Air Force nurses are advancing healthcare and improving patient outcomes through a culture of inquiry. The ongoing process of questioning and evaluating practice, providing evidence-based care, creating practice changes through research, and evaluating the outcomes of our care reflects our culture of inquiry. In support

of this culture, the Air Force Nurse Corps sponsored a competition that highlighted research and evidence-based projects currently being implemented to improve patient care. Some of this work will be presented at this year's nursing leadership symposium, demonstrating the advancement of evidence-based care not only by our Nurse Researchers but, more importantly, by the nurses who provide direct patient care.

An excellent example of this initiative is the nursing staff of the Neonatal Intensive Care Unit (NICU), Kadena AB, Okinawa, Japan, who have taken patient safety to the next level. In 2011, 185 infants were admitted to the NICU. Often, these seriously ill neonates require the placement of a central intravenous catheter for administering life sustaining medications and fluids. Unfortunately, these central lines can be a source of infection, which can lead to life-threatening blood stream infections and even death. Although the unit's central line infection rate of 3.9 percent was well below the national average of 10 percent, the staff strived for a zero percent infection rate, due to the increased risk of mortality for these vulnerable patients. In fiscal year 2011, the nursing staff implemented a new procedure used during the care and management of central lines. Following the implementation of this innovative solution they achieved their goal: zero infections from 69 central lines (representing 393 line days).

Research initiatives completed this year demonstrate the strategic leadership role played by our nurse scientists. In January 2012, Lieutenant Colonel Susan Perry, Assistant Professor in the CRNA program at USUHS, completed her Ph.D. Her ground-breaking research identified a genetic abnormality that may predispose an individual to malignant hyperthermia, an inherited muscle disorder triggered by certain types of anesthesia. Lieutenant Colonel Perry's research advances our understanding of this potentially fatal disease and provides insight into strategies to decrease the risk for malignant hyperthermia. Her research highlights the unique opportunities given to our students who study at the USUHS, as she was able to work in one of the only laboratories in the world dedicated to malignant hyperthermia. Similarly, current Ph.D. students at the USUHS School of Nursing have their introduction to research at the renowned National Institutes of Health.

Lieutenant Colonel Karen O'Connell, who completed her doctoral studies at USUHS, identified factors associated with increased mortality in combat casualties with severe head injury. According to her research, some of these factors are modifiable, which suggests areas of care that can be targeted to improve outcomes for these patients. Colonel Marla DeJong, Dean of the School of Aerospace Medicine, served as chairperson of the Scientific Review Committee for brain injury and mechanisms of action of hyperbaric oxygen therapy for persistent postconcussive symptoms after mild TBI. She also spearheaded the creation of baseline datasets that will be used in a study to evaluate the effect of hyperbaric oxygen therapy in casualties with post-concussive symptoms after mild TBI.

The research conducted by our nurse scientists is of the highest quality. In 2011, Colonel Bridges, with assistance from the Joint Combat Casualty Research Team (JC2RT), completed a study using noninvasive methods to monitor critically injured casualties during resuscitation. This research described the minute-by-minute changes in the combat casualty's vital signs and hemoglobin using a noninvasive probe placed on their finger. The results demonstrated the potential for earlier identification of clinical deterioration and the tailoring of resuscitation. This study received the 2011 Research Poster Award at the AFMS Research Conference. Colonel Sean Collins, Commander, 104th Medical Group, Westfield, Massachusetts, ANG and a nurse scientist, was the first guardsman to serve on the JC2RT. During his deployment at Camp Dwyer, Afghanistan, Colonel Collins played a vital role in advancing operational research and in articulating the importance of nursing research in the care of our warriors. Colonel Collins completed a landmark analysis of the relationship between physical symptoms reported during deployment and emotional health. Analysis is ongoing to further identify those at highest risk for poor health outcomes to allow for targeted interventions.

Research and evidence-based initiatives also focused on readiness. Colonel Bridges completed a list of operational nursing competencies, which were validated by deployed nurses. These competencies will aid in the standardization of training for nurses across all Services. The results of this study further validated the content of the TriService Nursing Research Program Battlefield and Disaster Nursing Pocket Guide. This pocket guide was updated in 2011, and 7,000 copies of the updated guide were distributed to Army, Navy, and Air Force nursing personnel. The evidence-based recommendations summarized are now the standards for Air Force nursing readiness training.

Along with research and evidence-based practice, we are also leveraging our existing collegial partnerships. One such endeavor is our participation in the Federal

Nurses Service Council. This council includes the Service Chief Nurses, Directors of Nursing, Public Health, Veterans Affairs, USUHS, the American Red Cross, and Reserve counterparts of the Army, Navy, Air Force. This year, the group developed a strategic plan that focuses on blending our efforts as a single professional voice on three strategic Federal Nursing priorities: Role Clarification, Culture of Inquiry, Influence, and Collaboration. As a united force, we can tackle tomorrow's healthcare challenges today.

WAY AHEAD

The Air Force Nurse Corps is committed to achieving excellence in both the art and science of nursing. As a TNF, we will continue to invest in nursing research and foster a culture of inquiry to further advance quality patient outcomes. We will continue to advocate for and invest in academic preparation to retain the Master Clinician at the bedside. We will continue to optimize training opportunities and efficiencies within the Air Force, jointly, and with our civilian nursing colleagues. Above all, we will continue to invest in our nurses and technicians by focusing our efforts on enhancing resiliency, promotion opportunities, and education in order to retain those individuals whose experience makes military nursing the best in the world.

In closing, as Colonel Mary Carlisle, Commander Surgical Services, Misawa, AB, Japan stated, "You will know you're a military nurse when you visit the National Mall in Washington DC, and Vietnam Veterans visiting The Wall, tell you their stories of how nurses saved their lives, and then they thank you for serving. Then you swallow the lump in your throat and blink back the tears in your eyes and continue doing what you were doing without missing a beat. You can't find the right words to explain to anyone what you've just been through. You will know you're a military nurse when at the end of the day, at the end of the tour, or the career, you say, I'd do it all over again."

Mr. Chairman and distinguished members of the subcommittee, it is an honor to represent a committed, accomplished Total Nursing Force. Our Nation's heroes and their families depend on our nurses and technicians to deliver superior, safe, and compassionate care. Grounded in high-touch, high-care, our Air Force nurses and technicians proudly serve and will continue to deliver world-class healthcare anytime, anywhere.

**STATEMENT OF REAR ADMIRAL ELIZABETH S. NIEMYER, DIRECTOR OF THE NAVY NURSE CORPS**

Chairman INOUYE. Thank you very much, General Siniscalchi. May I now recognize Admiral Niemyer?

Admiral NIEMYER. Good morning, Chairman Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee. I'm extremely pleased to be here and thank you for the opportunity to speak on behalf of the Navy Nurse Corps. Support of the operational forces continues as the top priority. In addition, I've remained focused on five key strategic areas: Workforce, nursing knowledge, research, strategic partnerships, and communication. My written statement has been submitted for the record, and today I will share some of Navy nurses' remarkable accomplishments in these vital areas.

The Navy Nurse Corps is comprised of 5,842 Active, Reserve, and Federal civilian registered nurses, delivering outstanding patient- and family-centered care. At the end of fiscal year 2011, our Active component was 94-percent manned, and our Reserve component was 88-percent manned. We are projecting another successful year in attaining our fiscal year 2012 recruiting goals.

People are our most vital asset, and I remain committed to recruiting and retaining nurses ready to meet the challenges of Naval service. The Nurse Accession Bonus and Nurse Candidate Programs are top recruiting programs for our Active component, while accession and affiliation bonuses, and loan repayment programs are most successful with our Reserve component.

For the past 2 years, the Navy Nurse Corps has sustained improvements and retention. The registered nurse incentive special pay, Health Profession Loan Repayment Program, and Duty Under Instruction for graduate education are key to this forward progress. Mr. Chairman, I thank you for your continued support of these crucial programs.

This past year, 342 Active and Reserve Navy nurses served throughout the Central Command area of responsibility as members of Shock Trauma Platoons, Forward Resuscitative Surgical Systems, and other forward-operating medical units. They were also vital to medical stability operations, serving as members of embedded training and provincial reconstruction teams.

Infants and children comprise approximately 25 percent of the trauma patients treated at the Kandahar Role 3 Multinational Medical Unit. Navy nurses with advanced expertise in maternal infant, neonatal intensive care, and pediatric nursing played a pivotal role in providing outstanding trauma care, staff development, and patient and family education for this precious population.

Integral to the Navy's mission is a "Global Force for Good." Navy nurses also supported humanitarian assistance missions. In 2011, Active and Reserve Navy nurses, together with nurses from nongovernmental organizations and partner nations supported the longstanding humanitarian and civic assistance operations, continuing promise and Pacific Partnership. Their actions further strengthened regional cooperation, interoperability, and relationships with partner nations.

Our clinical and leadership roles with the Marine Corps continue to expand. For the first time, a Navy Nurse Corps officer serves as the First Marine Expeditionary Force Headquarters Group Surgeon at Camp Leatherneck, Afghanistan. Navy nurses with battlefield injury expertise are also serving as clinical advisers at Headquarters Marine Corps, Marine Corps Combat Development Command, and the Marine Corps Warfighting Lab, assisting Marine Corps Dismounted Complex Injury Teams to prevent and treat these devastating injuries.

Here at home, Navy nurses are recognized clinical experts and educators for the care of wounded warriors, with psychological health issues and TBI. Nurses are central to the new in-patient units, offering convenient, private, holistic, and coordinated care for our wounded warriors and their families.

Psychiatric Mental Health Nurse Practitioners can continue to enhance the resiliency and mission readiness of our sailors, marines, and their families. We responded to the increased demand for mental healthcare, and grew our Psychiatric Mental Health Nurse Practitioner community from 8 to 23 billets. I'm pleased to share that following the graduation of seven students this year, this vital community will be 100-percent manned.

The Navy Nurse Corps is committed to doctoral education, with 21 nurses in doctoral study, and another 12 selected this year for programs taking them directly from bachelor to doctoral degrees in advance practice specialties and Ph.D.'s in nursing research. I remain committed to increasing and diversifying our footprint in nursing research.

In 2011, the positions of executive Director of the Tri-Service Nursing Research Program (TSNRP) and Deputy Director of the Joint Combat Casualty Research Team overseeing research activities in Iraq, Afghanistan, and Kuwait were held by Navy nurses. Additionally, Navy nurses were granted $1.5 million in TSNRP funds as principal investigators for new and diverse projects. Mr. Chairman, I'm extremely grateful, and would like to thank you again for your ongoing support of nursing research.

Joint and integrated work environments are the new order of business. As such, Navy nurses promote, build, and strengthen strategic partnerships, work with our sister services, the Department of Veterans Affairs, and other Federal and nongovernmental agencies. They also serve as individual augmentees and teach at the Uniformed Services University Graduate School of Nursing.

PREPARED STATEMENT

Navy nurses are pivotal to the success of every mission involving Navy Medicine. We remain focused on improving the health of those entrusted to us by providing a care experience that is patient- and family-centered.

Senator Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee, thank you for your unwavering support of military nursing and the profession of nursing.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF REAR ADMIRAL ELIZABETH S. NIEMYER

INTRODUCTION

Good morning. Chairman Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee, I am extremely pleased to be here again and thank you for the opportunity to speak on behalf of the Navy Nurse Corps.

The Navy Nurse Corps is comprised of 4,059 Active and Reserve component and 1,783 Federal civilian registered nurses. Together, they are a unified and highly respected team of healthcare professionals known for their unwavering focus on delivering outstanding patient- and family-centered care for our Active Duty forces, their families, and our retired community. The clinical expertise and leadership of Navy nurses ensures a fit and ready fighting force vital to the success of Navy and Marine Corps operational missions at sea and on the ground. Navy nurses also play a key role in medical stability operations, deployment of hospital ships and large-deck amphibious vessels and humanitarian assistance/disaster relief (HA/DR) efforts around the globe. Nurses are central to the provision of outstanding care and optimal patient outcomes for beneficiaries and wounded warriors here at home serving in various clinical and leadership roles within our military treatment facilities (MTFs) and ambulatory care clinics.

I would like to share some of the remarkable accomplishments of Navy nurses over this past year, as well as discuss opportunities and challenges before us in 2012. First, I will talk about the contributions of Navy nurses serving in unique roles and environments supporting operational, humanitarian, and disaster relief missions. Second, I will highlight the significant work and resulting successes our Corps has achieved in the past year in my five key strategic focus areas of:

—Workforce;
—Nursing knowledge/Clinical excellence;
—Research;
—Strategic partnerships; and
—Information management/Communication.

Last, I will discuss our future challenges and opportunities as we remain steadfast in our commitment to ensure the provision of the highest quality of care to those entrusted to us.

OPERATIONAL, HUMANITARIAN, AND DISASTER RELIEF SUPPORT

Our commitment to operational forces remains a top priority. Over the past year, Navy nurses continued to be an invaluable presence with 223 Active and 119 Reserve component nurses actively engaged in military operations throughout the Central Command area of responsibility for Operation Enduring Freedom (OEF). Navy nurses are ready to deploy anytime, anywhere, and they continue to set the standard for excellence as clinicians, patient advocates, mentors, and leaders providing compassionate and holistic care even in the most austere conditions.

Navy nurses are an integral part of diverse units and teams throughout the Helmand and Nimroz Provinces in Afghanistan. They are key members of shock trauma platoons (STPs) and forward resuscitative surgical systems (FRSSs) assigned to Marine Corps medical battalions, expeditionary forces, and logistics groups supporting the immediate pre- intra- and post-operative phases of care for traumatically injured patients. They are also trained and qualified to provide en-route care and medical support in rotary wing airframes during the transport of injured U.S. servicemembers, Coalition Forces, Afghan military and civilian security personnel, and local nationals to higher levels of care.

A Nurse Corps officer assigned to the Alpha Surgical Shock Trauma Platoon at a Role 2 Emergency Medical Care unit located on a remote forward operating base (FOB) in Afghanistan served as the senior critical care nurse. Her expertise in critical care nursing was crucial to ensuring the 100-percent survival rate of personnel receiving immediate after injury care in this unit. Additionally, she provided exceptional leadership and was an experienced clinical resource for 22 nurses across six FOBs in the Helmand and Nimroz Provinces.

Following initial life-saving stabilization at the point of injury on the battlefield, critically injured patients are transported to comprehensive medical facilities such as the Role 3 Multinational Medical Units in Kandahar and Bastion, Afghanistan. In Kandahar's Role 3 facility, Navy nurses provide unparalleled clinical leadership and world-class care to critically injured NATO, coalition, and Afghan combat casualties. Focused on providing the best-possible care for combat wounded, they developed a comprehensive cross-training program for nurses and corpsmen serving in clinical areas outside the emergency/trauma specialty. This training gave them the clinical expertise and technical skills to competently work as members of the multidisciplinary trauma teams vital to this operational emergency/trauma environment. The ready availability of additional personnel trained in emergency/trauma significantly increased the Role 3's capability to effectively respond and provide life-saving trauma care for several casualties simultaneously. This innovation was put to the test and proved invaluable during a real mass casualty situation when Role 3 personnel were able to immediately establish seven highly functional trauma teams to successfully treat eight severely injured servicemembers transported directly from the battlefield. This training has also been credited with providing adequate numbers of trained personnel to establish additional forward surgical capability while still meeting the Role 3 mission.

A unique challenge at the Kandahar Role 3 Multinational Medical Unit is that about 25 percent of the complex trauma cases are infants and children. This necessitates a unique clinical knowledge base in which Navy nurses have shown their exceptional adaptability and flexibility. In addition to nurses with surgical, emergency/trauma, critical care, and medical-surgical backgrounds—specialties considered to be wartime critical—nurses with experience in maternal-infant, neonatal intensive care, and pediatrics are now playing a pivotal role in ensuring the provision of outstanding hands-on care, staff development, and patient and family education for this precious population. These nurses are also volunteering off-duty time serving as health educators at the Kandahar Regional Military Hospital, providing health promotion and disease education to Afghan soldiers, women, and children.

Although our mission supporting the British Role 3 Multinational Medical Unit in Bastion, Afghanistan was completed near the end of 2011, Navy nurses from all clinical backgrounds demonstrated a remarkable ability to integrate into the British medical team. They not only gained the advanced clinical skills needed to treat critical and complex polytrauma casualties, but they also provided this advanced care utilizing British trauma and treatment protocols. Among this stellar group are emergency/trauma nurses who rapidly progressed in mastering the advanced knowledge and skill required to serve as Trauma Nursing Team Leaders in the British hospital. In this role, they demonstrated exceptional leadership and nursing skills in the management of the most severely injured trauma patients. In accordance with nationally recognized trauma scales, patients treated at the Role 3 in Bastion typically have injury severities scoring twice as high as the average patient seen in a Level 1 trauma center in the United States. There is no doubt nurses are making

a tremendous contribution to the unprecedented 95 percent and 98 percent survival rate of casualties treated at the British Role 3 in Bastion and Kandahar Role 3 Multinational Medical Unit, respectively.

In addition to providing cutting edge care to the wounded, Navy nurses are uniquely trained and qualified in illness prevention and health promotion. A Navy nurse assigned as a medical/surgical nurse put her graduate education in public health to use as the Infection Control Officer for the Kandahar Role 3. In her off-duty time, she also served as the Role 3 liaison to the Army Preventive Medicine personnel at the Kandahar Air Field. In this capacity, she developed infection control policies and collaborated in the development of a clinical investigation on multiple drug-resistant organisms (MDROs) infecting the wounds of our injured servicemembers. This clinical investigation is being continued by replacement personnel and will provide meaningful data to identify, treat, and alleviate this serious health threat facing our troops.

Throughout Afghanistan, Navy nurses are primary members of medical stability operations serving with North Atlantic Treaty Organization (NATO) forces and teams led by the other Services as members of Embedded Training and Provincial Reconstruction Teams. They provide medical support and serve as healthcare system consultants for NATO forces, nonmedical United States and Afghan forces, tribal leaders, and local nationals to assist in the establishment of a healthcare infrastructure in Afghanistan. They also serve as mentors and teachers for Afghan military and civilian medical personnel in the Afghanistan National Army Hospital. Their contributions in exchange of knowledge will enhance the quality of medical care for Afghan military and police forces and the people of Afghanistan for generations to come.

Last year, I spoke of Navy nurses serving as teachers and mentors for members of the Afghan National Army Nurse Corps through a Health Service Engagement Program project called "Shana baShana" (Shoulder-to-Shoulder) at the Kandahar Regional Military Hospital. Their efforts were to support Afghan nurses' professional development and produce long-term improvements in nursing practice in the Afghan healthcare system. Mr. Chairman, I am extremely proud to report that this partnership has significantly increased the clinical knowledge and skill level of the Afghan Army nurses. The Kandahar Regional Medical Hospital is now receiving and providing medical care and treatment to nearly all Afghan Security Forces battlefield injuries with the exception of severe head and/or eye injuries, as well as conducting a weekly outpatient clinic for Afghanistan civilians.

Navy nurses also play a key role in civil-military operations and health-related activities such as those conducted by the Combined Joint Task Force Team—Horn of Africa (CJTF–HOA) whose members are involved in the local communities building and renovating clinics and hospitals and providing medical care to local populations. In support of the personnel conducting this operation in Africa, a Navy nurse assigned to the Expeditionary Medical Facility (EMF) in Camp Lemonier, Djibouti, Africa, led junior nurses in the provision of care for medical/surgical, critical care, and primary care patients. As the sole experienced perioperative nurse on the medical team, he managed clinical operations and provided perioperative care for all surgical procedures performed at the only U.S. operating suite within theater. His outstanding efforts ensured the delivery of the highest-quality care and force health protection for return to duty or transfer to higher levels of care for critical, mission essential U.S. Africa Command (AFRICOM) personnel.

In "A Cooperative Strategy for 21st Century Seapower," the U.S. lists HA/DR as one of the core components of our maritime power and an activity that helps prevent war and build partnerships. Integral to the Navy's expanding maritime strategy as a "Global Force for Good" are Navy nurses who serve in a very different role than on the battlefield but an equally important and vital role in the Navy's HA/DR mission. In this role, Navy nurses provide outstanding care and education that ensures long-term improvements in the health and quality of life by enhancing the partner nation's capacity to provide care after the Navy departs. The trusting and collaborative relationships they forge with our host nation partners strengthens U.S. maritime security and facilitates the on-going training for disaster relief scenarios, ultimately improving capability to work together with partner nations in the event of a disaster in the future.

From April to September 2011, 93 Active and Reserve component Nurse Corps officers, as well as nurses from nongovernmental organizations and partner nations embarked aboard the USNS *Comfort* (T–AH 20) for Continuing Promise providing humanitarian civic assistance to nine countries in Central and South America and the Caribbean. Navy nurses were also key members of the healthcare teams aboard the USS *Cleveland* (LPD 7) for Pacific Partnership 2011 supporting humanitarian efforts in Tonga, Vanuatu, Papua New Guinea, East Timor, and Micronesia. Nurses

served in a variety of roles as direct patient care providers, case managers, discharge planners, Medical Civic Action Program (MEDCAP) site leaders, patient educators, trainers for partner nation healthcare providers, and mentors.

On March 11, 2011, mainland Japan experienced a 9.1 magnitude earthquake. In its aftermath, a catastrophic tsunami and subsequent Fukushima nuclear meltdown devastated the Pacific coastline of Japan's northern islands. Navy nurses were once again at the ready providing reassurance, advocacy, education, and compassionate care for local nationals, Active Duty and retirees and their family members during Operation Tomodachi. In theater, nurses at sea aboard the USS *Ronald Reagan* (CVN 76), one of the first ships to arrive on station following the tsunami, and nurses assigned to Fleet Surgical Team SEVEN aboard the USS *Blueridge* (LCC 19) rapidly prepared for the possibility of a mass influx of casualties and provided care for the sailors conducting air search and rescue/recovery operations.

Navy nurses were also actively supporting our military personnel and families on the ground. A Navy Certified Nurse Midwife at U.S. Naval Hospital, Yokosuka, Japan, led the early identification and recall of expectant mothers providing timely and appropriate outreach assessment and education for this high-risk, vulnerable patient population and coordinated the medical evacuation of 19 families transferred to Okinawa, Japan. When low levels of radiation were detected, a Navy Family Nurse Practitioner led one of the five potassium iodide distribution sites with fellow nurses providing educational counseling for the remaining 200 expectant mothers and more than 2,800 parents with children under the age of 5. Labor and delivery nurses were medical attendants for expectant mothers and family members during their transport flight to Okinawa, Japan and provided assistance to U.S. Naval Hospital, Okinawa during this influx of obstetric patients.

Nurses stationed at U.S. Naval Hospital, Okinawa provided medical and emotional support for 27 expectant mothers medically unable to return to the United States and family members arriving from Yokosuka, Iwakuni, Misawa, and Camp Zama. The first birth occurred just 2 days after arriving on Okinawa with the rest of the births following over the course of the next 4 weeks. Nursing support of these families did not stop following delivery and discharge from the hospital. Over the course of their 3-month stay, the nurses ensured the delivery and coordination of the highest-quality care until their safe return home.

Fleet nurses continue to be a significant part of Navy Medicine's medical support and training to our sailors and marines at sea. On aircraft carriers, well-rounded nurses, specialized in critical care, emergency/trauma, and anesthesia provide care and safeguard the health and well-being of 4,000–5,000 crew members and embarked personnel, as well as train and prepare the ship's crew to effectively manage a disastrous event resulting in mass casualties. Their actions significantly contribute to overall mission success by ensuring total force readiness while underway.

Extremely versatile, Navy nurses also provide tremendous support to the amphibious fleet as members of Fleet Surgical Teams (FSTs) bringing medical and surgical support, inpatient care and training capability to Navy vessels for a variety of missions. For example, a FST nurse anesthetist worked alongside medical officers of the Royal Singapore Navy providing clinical training and leadership during the 3-day medical training portion of "Cooperation Afloat Readiness and Training (CARAT)," an annual exercise between the U.S. Navy, its sister services, and the maritime forces of eight Southeast Asian countries. His sharing of medical knowledge strengthened regional cooperation, interoperability and relationships between partner nations increasing regional maritime security and stability.

FST nurses aboard the USS *Wasp* (LDH 1) provided the around-the-clock medical and surgical support required to conduct flight deck operations during the 18 days of initial sea trials of the F35B Lightening II Joint Strike Fighter. They supported the 22nd Marine Expeditionary Unit aboard the USS *Bataan* (LDH 5) during Joint Task Force Odyssey Dawn, a limited military action to protect Libyan citizens during a period of unrest. FST nurses aboard the USS *Essex* (LDH 2) were integral members of the medical contingency supporting President Obama's attendance at the 19th Association of Southeast Asian Nations (ASEAN) Summit in Bali, Indonesia, providing a readily available medical platform in the event of an unforeseen crisis.

Navy nurses continue to serve side-by-side with the marines in vital clinical and leadership roles providing invaluable medical support and training. For the first time, a Family Nurse Practitioner is filling the role as the First Marine Expeditionary Force Headquarters Group Surgeon at Camp Leatherneck, Afghanistan. Nurses are now also serving in unique roles as clinical advisors at Headquarters Marine Corps (HQMC), Marine Corps Combat Development Command and the Marine Corps Warfighting Lab giving clinical input and recommendations to the Marine Corps dismounted complex blast injury (DCBI) team to prevent and treat blast

injuries. Their clinical expertise, battlefield experience and knowledge of recent theater requirements contributed invaluable input for improvements in the equipment carried by marines and sailors and implementation of tactical combat casualty care (TCCC) recommendations for pre-hospital care that markedly increased the chance of survival for casualties. These nurses also collaborated with Coalition Forces through American, British, Canadian, and Australian/New Zealand Armies to implement TCCC and DCBI guidelines throughout the pre-hospital phase standardizing care across the nations.

The recently released National Defense Strategy "Sustaining Global Leadership: Priorities for the 21st Century" states, "We will of necessity rebalance toward the Asia-Pacific region" and we will "emphasize our existing alliances, which provide a vital foundation for Asia-Pacific security." Navy nurses assigned to the 3D Medical Battalion, 3D Logistics Group are essential leaders and subject matter experts in Pacific Medical Stability Operations. These nurses trained the corpsmen responding to Operation Tomodachi and provided direct medical support and training to FRSS, STP, and en-route care nurses. They also trained coalition medics and lay health providers embedded with the military medical assets involved in joint training exercises for international nation building in the Philippines, Thailand, Korea, and Cambodia. Overall, these nurses function as key leaders and planners in the development and execution of operational field training exercises that encompass Mission Essential Task List requirements for global operational readiness. The care, healthcare education, medical training, and leadership they provide while serving side by side with our marines is unparalleled.

Through these diverse examples, it is clear that Navy nurses personify the Navy's slogan, "Whatever it takes. Wherever it takes us." Navy nurses are central to the delivery of safe, comprehensive, and high-quality care often in the most demanding, challenging, and austere missions supported by Navy Medicine. Our Corps continues to make a significant impact on the long-term health and quality of life of our sailors and marines, as well as citizens of our international partner nations. Mr. Chairman, the remainder of my testimony will highlight Navy nursing's achievements in my five strategic focus areas:

—Workforce;
—Nursing knowledge/Clinical expertise;
—Research;
—Strategic partnerships; and
—Information management/Communication.

OUR WORKFORCE

The Navy Nurse Corps recognizes its people as our most vital asset, and we are committed to maintaining a force of highly skilled and adaptable nurses ready to meet the diverse challenges of Naval service. The Navy Nurse Corps Active component (AC) was 94-percent manned at the end of fiscal year 2011. The Navy Nurse Corps remains an employer of choice as evidenced by our projected successful attainment of our fiscal year 2012 AC recruiting goal. Although more challenging, our Reserve component (RC) is working very hard to attain similar recruiting success and was 88-percent manned at the end of fiscal year 2011. These recruiting achievements are attributed to continued funding support for our accession and incentive programs, recruiting activities of local Navy Recruiters, active participation of Navy nurses in local recruiting efforts, and the public's positive perception of service to our country.

The Nurse Accession Bonus and the Nurse Candidate Program remain our two most successful recruiting programs for Active-Duty nurses entering the Navy through direct accessions. For our Reserve component, officer accession, and affiliation bonuses for critical shortage or high-demand specialties such as Certified Registered Nurse Anesthetist, Psychiatric/Mental Health Nurse Practitioners, critical care, medical-surgical, perioperative, and psychiatric nursing, and loan repayment programs for Certified Registered Nurse Anesthetist and Psychiatric/Mental Health Nurse Practitioners remain the most successful recruiting tools.

Last year, the Navy Nurse Corps experienced a significant decrease in our loss rates. I am happy to report the 2011 loss rates remained consistent with the improvements seen the prior year, particularly in our mid-level officers. We will make every effort to sustain these gains through long-term retention of these highly trained and qualified nurses. The Registered Nurse Incentive Special Pay (RN–ISP) and Health Professions Loan Repayment Program (HPLRP) remain central to our retention success. Full-time duty under instruction (DUINS) offering graduate education leading to advanced nursing degrees remains a major program for attracting new nurses as well as retaining those experienced Nurse Corps officers who desire

advanced nursing education. I would like to thank you, Mr. Chairman, Vice Chairman Cochran, and all subcommittee members, for your continued support of these vital recruiting and retention programs.

Although we have experienced great success in nurse recruitment and retention over the past several years, our efforts to attract and keep the best and brightest nurses is still a top priority. Navy nurses throughout the United States and abroad are actively involved in nurse recruitment and retention efforts to ensure the sustainment of a Corps with the most talented nurses. We are currently in the middle of our second successful tour with a Nurse Corps Fellow assigned to the Nurse Corps Office to monitor recruitment and retention efforts. Her presence at professional nursing conferences and job fairs speaking with new graduates and nurses across the United States provides an invaluable opportunity for us to gain real time information for prioritizing, planning, and implementing our recruitment and retention goals.

Last year, I spoke of our focused efforts to build our psychiatric/mental health nurse practitioner (PMHNP) community in response to an ever-growing healthcare need. PMHNPs continue to have a significant impact on building resiliency and enhancing the mission readiness of our sailors, marines, and families serving in diverse roles with the 1st, 2d, and 3d Marine Divisions, in stateside and overseas MTFs and clinics, and a myriad of deployments in support of our fighting forces. I am pleased to say over the past 5 years, we have increased our PMHNP billets from 8 to 23. There are currently 17 nurses practicing in this specialty. With the anticipated graduation of seven PMHNPs in May of this year, this vital community will be 100-percent manned with several remaining in and selected for the training pipeline to maintain maximum manning levels in this critical specialty.

NURSING KNOWLEDGE/CLINICAL EXCELLENCE

Clinical excellence in the provision of holistic and compassionate patient- and family-centered care is the cornerstone of Navy nursing and remains one of my top strategic priorities. Navy nurses are respected healthcare professionals actively involved in all levels of professional nursing organizations, the advancement of nursing practice, and sustainment of clinical excellence. The National Conference of the American Academy of Nurse Practitioners inducted two Navy nurses into the prestigious Fellows of the American Academy of Nurse Practitioners and another was honored as the recipient of the Pacific U.S. Territories State Award for Excellence.

The Navy Nurse Corps remains committed to our nurse practitioners and nurse anesthetists attaining doctoral education through our full-time DUINS program. We currently have 21 nurses in the training pipeline in programs that will take them directly from Bachelor's education to doctoral study, in specialties that include Certified Registered Nurse Anesthetist, Psychiatric/Mental Health Nurse Practitioner, Family Nurse Practitioner, Pediatric Nurse Practitioner as well as Nursing Research. This year, we selected 12 more nurses for doctoral education.

Nurses new to the Navy face many unique challenges from learning the intricacies of patient care and becoming competent in the application of newly acquired knowledge, skills, and abilities (KSAs), to integrating into the Navy culture as a commissioned officer. Developing clinical expertise begins immediately upon the Nurse Corps officer's arrival at their first-duty assignment. To ensure novice nurses a smooth transition into this challenging clinical role and environment, we developed a standardized Nurse Residency Program based on the Commission on Collegiate Nursing Education's "Standards for Accreditation of Post-BSN Nurse Residency Programs" and implemented it across Navy Medicine. This program provides an avenue for new nurses to gain competence, confidence, and comfort through didactic learning. It integrates evidence-based practice concepts, a designated preceptor in each clinical rotation site and a list of expected knowledge, skills, and abilities to be achieved for competency-based learning. Although implemented at all facilities receiving novice nurses, the largest impact of the Nurse Residency Program can be felt at our medical centers. Recognized for the diverse and complex clinical training these large tertiary care facilities provide, they receive the largest numbers of novice nurses with more than 200 nurses completing the residency program at large MTFs annually.

Over the past few years, the Nurse Corps has identified nursing specialties vital to routine and operational missions, developed standardized core competencies for these specialties, and ensured the development and sustainment of clinical proficiency for nurses throughout the enterprise. This year, significant work was done to update the core competencies based on current specialty practice standards. Formal policy was also developed to provide guidance for nursing leaders to sustain the utilization of these core clinical competencies and clinical proficiency in the identi-

fied critical specialties. This work will ensure nurses sustain the necessary clinical knowledge and skills within their clinical specialties to continually meet and succeed in any mission they are asked to fulfill.

Earlier in this testimony, I gave examples of advanced nursing knowledge and clinical excellence of Navy nurses who are providing heroic care to our Armed Forces in theater at the point of injury for initial stabilization, during transport to higher levels of care and upon receipt to Role 3 facilities. This nursing knowledge and clinical excellence is also pivotal in every facet of care we provide our wounded warriors from the time they return stateside through their return to Active Duty or medical separation from Active service. Navy nurses are essential to creating and implementing innovative approaches to convenient and comprehensive treatment that enhances the care experience for our wounded warriors.

Navy nurses serving at Walter Reed National Military Medical Center (WRNMMC) continue to do phenomenal inpatient work on the Traumatic Brain Injury/Post Traumatic Stress Disorder Unit. They are recognized subject matter experts and educators on the topic of nursing care for patients with psychological health-traumatic brain injury (PH–TBI). They serve as instructors at the Uniformed Services University of the Health Sciences (USUHS) on evidence-based nursing interventions so nurses new to this specialty have knowledge of current practice trends for PH–TBI. This past year, they also taught at Andrews Air Force Base instructing members of the Air Force Explosive Ordinance Disposal Team about the signs and symptoms of TBI to facilitate earlier identification and initiation of treatment for servicemembers.

Inpatient nurses at the Naval Medical Centers San Diego and Portsmouth led the establishment of new inpatient units focused on the care of our returning wounded warriors. These units facilitate a smooth transition to the stateside MTF and provide comprehensive, convenient care in one centralized location. The "one-stop-shop" care concepts include direct admission to the unit providing a quiet, comfortable, and private environment for initial medical evaluations and often the first-time reunions with their families. Services brought to the patient include physical and occupational therapy, Project C.A.R.E. (Comprehensive Aesthetic Restorative Effort), education, and support groups for amputees and those experiencing combat operational stress, radiography, casting, evaluation by the acute pain service, and complex wound care. The care provided on these patient- and family-centered units has a tremendous impact on the recovery of our wounded warriors and their families.

Navy nurses continually research best nursing practices and align with national healthcare initiatives in an effort to advance the outstanding care they provide to our beneficiaries. Nurses were instrumental to Naval Hospital Jacksonville's becoming 1 of only 119 hospitals throughout the United States to have earned the "Baby Friendly" designation by "Baby Friendly USA," a global initiative sponsored by the World Health Organization (WHO) and United Nations Children's Fund. To achieve this designation, staff educational and facility design requirements must be met as well as passing a rigorous on-site survey. To maintain this designation, the staff must provide 10 clinical practices that include initiating breastfeeding within the first hour of life, keeping mothers and babies in the same room, and providing support groups for women who breast feed.

Nurses at Okinawa, Japan introduced evidence-based practice initiatives endorsed by the Institute of Healthcare Improvement (IHI) and the Robert Wood Johnson Foundation's program Transforming Care at the Bedside (TCAB), a national effort to improve the quality and safety of care on medical surgical units and improve the effectiveness of the entire care team. They led the implementation of multidisciplinary patient rounds and change of shift nursing report at the patient's bedside. These changes provide an opportunity for the patient and family members to be fully engaged in their plan of care with all members of the healthcare team. They also started the practice of having patient safety huddles throughout the shift to communicate changes in patient status or plan of care so all members of the healthcare team are aware prior to the care hand-off at the change of shift. These nurse-led practices improved the effectiveness of the healthcare team's communication with the patient and with each other, increased the quality and efficiency of patient care hand-offs, and significantly reduced medication errors. These improvements have also been major contributors to the unit's overall 93 percent patient satisfaction score, the highest of any department in the hospital.

## NURSING RESEARCH

Advancing the science of nursing practice through research and evidence-based practice to improve the health of our patients is a vital strategic focus for the Navy Nurse Corps. Navy nurses authored more than 30 nursing publications and pro-

vided more than 50 formal presentations at various professional forums. We remain committed to increasing and diversifying our footprint in the field of research. This year, a team of outstanding nurses completed significant work to create a culture of scientific inquiry and revitalize nurses' interest in research, as well as increase the number of submissions and selections for projects funded by the Tri-Service Nursing Research Program (TSNRP).

Fundamental to the growth and development of nurse researchers is the availability of experienced mentors to guide and teach research novices throughout the process. To address this need, a nurse researcher position was developed and filled by experienced researchers at Navy Medical Center San Diego, Naval Medical Center Portsmouth, and WRNMMC. Additionally, a nursing research network data base listing personnel with experience in research along with a list of research educational offerings was developed and placed on Navy Knowledge Online (NKO) providing a centralized location with easy accessibility for nurses throughout Navy Medicine. Last, a Nurse Corps recognition program was established to recognize and promote excellence in implementing evidence-based nursing practice.

Mr. Chairman, we are extremely grateful for your continued support of the TSNRP, and I am proud to say that Navy nurses in both the Active and Reserve component are actively involved in leading and conducting Navy and joint research and evidence-based practice projects. In 2011, a Navy nurse took the helm as Executive Director of TSNRP and for the first time in Navy Medicine's history, a Navy nurse was selected to serve as the Deputy Director of the Joint Combat Casualty Research Team (JCCRT) overseeing medical and operational research activities in Iraq, Afghanistan, and Kuwait. Navy nurses completed research projects funded through TSNRP that have provided meaningful information to improve the care of our beneficiaries. One such study entitled, "Stress Gym for Combat Casualties" explored the lived experiences of combat casualties and the military nurses who cared for them. That information was used to develop and implement a Web-based intervention called Stress Gym, which provides an anonymous and private avenue for combat wounded to learn about the effects of and methods to manage stress, anxiety, anger, post-traumatic stress disorder (PTSD), and symptoms of depression. Stress Gym is extremely valuable in assisting nurses to address the psychosocial needs of returning warriors.

Another study entitled "Psychometric Evaluation of the Triage Decision Making Inventory" resulted in findings that will assist us in preparing our nurses for deployment. This study validated the "Triage Decision Making Inventory" as a reliable tool for assessing nurses' clinical competence. Nurses working in any clinical specialty can now utilize this tool to evaluate their knowledge and target additional clinical experience and training as necessary to ensure optimal clinical readiness for operational deployments.

A recently completed Tri-service study entitled, "Factors Associated with Retention of Army, Navy and Air Force Nurses" provided invaluable insight into why nurses stay in the military. Among the most important findings revealed in this study was that deployments, originally thought to be a significant factor in determining nurses' job satisfaction and retention, were actually not a significant factor. Most servicemembers are happy to deploy and saw this as their patriotic duty. Other factors influencing job satisfaction and retention in the military are based on opportunity for promotion, relocation frequency, professional leadership/autonomy, and ongoing opportunity to work in their clinical specialty. These findings are vital to the development of policy and leadership practices that facilitate continued job satisfaction and retention of our highly educated, skilled, and dedicated nurses.

Numerous funded projects are currently in progress, and in 2011, Navy nurses were granted $1.5 million in TSNRP funds as Principal Investigators (PI) for new projects proposing to study cognitive recovery from mild traumatic brain injury, new treatments for hemorrhagic shock, elective surgery outcomes for veterans with PTSD, and the role of nurses working in Patient-Centered Medical Homes in the management of patients and/or populations with high rates of utilization of healthcare services. Mr. Chairman and distinguished members of the subcommittee, I would like to thank you again for you ongoing support of nursing research and I look forward to sharing the results of these studies in the future.

STRATEGIC PARTNERSHIPS

Collaboration is absolutely essential in today's environment of continued rising healthcare costs and limited financial resources. Joint and integrated work environments are now the "new order" of business. As leaders in Navy Medicine and the Military Healthcare System, Navy nurses possess the necessary skills and experi-

ence to promote, build, and strengthen strategic partnerships with our military, Federal, and civilian counterparts to improve the healthcare of our beneficiaries.

Currently, Navy nurses work with the Army, Air Force, the Department of Veterans Affairs (VA) and other Federal and nongovernmental agencies. They serve as individual augmentees (IAs), work in Federal facilities and joint commands, conduct joint research and teach at the Uniformed Services University Graduate School of Nursing. This past year, a nursing team was chartered to focus on exploring methods to further expand collaborative partnerships across Federal and civilian healthcare systems. Their diligent efforts resulted in the development of a standardized Memorandum of Understanding (MOU), approved by the Bureau of Medicine and Surgery (BUMED), to assist MTFs and clinics to more easily establish strategic partnerships with civilian medical and teaching institutions. These partnerships are necessary to increase collaboration and provide additional clinical experience and training opportunities for nurses to remain deployment ready.

A unique partnership has been established between Naval Health Clinic New England in Newport, Rhode Island, the Naval Branch Health Clinic in Groton, Connecticut and the Veterans Affairs Medical Center (VAMC) in Providence, Rhode Island. Navy nurses from these clinics work two shifts each month in the VAMC emergency room or intensive care unit. This partnership benefits both organizations as it provides an opportunity for Active-Duty nurses to sustain their critical wartime specialty skills while assigned in an ambulatory setting and gives the VAMC additional nurses to support the provision of outstanding care to our veterans. Nurses involved in this collaboration who have returned from deployment, believed their VAMC clinical experience enhanced their training and preparation for deployment and instilled the confidence necessary to effectively perform in their role while deployed.

Navy nurses serving at the Captain James A. Lovell Federal Health Care Center, the only VA and DOD integrated facility, work side-by-side with VA civilian nurse colleagues to provide high-quality care to Active-Duty military and their family members, military retirees, and veterans. Through this partnership, Navy nurses have increased their clinical knowledge and skills in the care of medical-surgical patients with more complex and chronic conditions seen in geriatric populations.

INFORMATION MANAGEMENT/COMMUNICATION

Strategic Communication is paramount to the successful achievement of the Navy Nurse Corps' mission. In 2008, the DOD's "The Principles of Strategic Communication" describes Strategic Communication as "the orchestration and/or synchronization of actions, images, and words to achieve a desired effect". One of the nine key principles listed in this document is that it must be leadership-driven and "to ensure integration of communication efforts, leaders should place communication at the core of everything they do". I am committed to continually improving communication in the Nurse Corps to further strengthen our effectiveness.

Today's global scope and varying degrees of technology venues are recognized variables in effective communication. This past year, I chartered a team of Nurse Corps officers to promote communication across the Nurse Corps by developing methods to sustain, advance, and evaluate current communication processes. This team conducted an environmental scan to gather data regarding the most preferred and most effective communication venues and analyzed the responses from more than 1,000 participants. Results obtained from the environmental scan survey have been operationalized into a Strategic Communication Playbook explaining the types of communication venues available, where these venues are located, and when the information is disseminated across the enterprise. Additionally, they completed the framework for a formalized Navy Nurse Corps Strategic Communication Plan. Our work in Strategic Communication will continue in the upcoming year, and I look forward to sharing our progress.

CONCLUSION

Navy nurses continually embody the highest caliber of naval officers and healthcare professionals. They remain at the forefront of clinical and military leadership, pivotal to the success of every mission involving Navy Medicine. Their commitment to clinical excellence, advanced education, scientific inquiry, operational medicine, and global health is unsurpassed. In every mission at home and abroad, our efforts remain focused on improving the health of those entrusted to our care by providing a care experience that is patient- and family-centered, compassionate, convenient, equitable, safe, and always of the highest quality.

Senator Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee, thank you again for this opportunity to share the remarkable accom-

plishments of Navy nurses and your unwavering support of the nursing profession. I am honored to be here representing the men and women of the Navy Nurse Corps and look forward to my continued service as the 23d Director of the Navy Nurse Corps.

**STATEMENT OF MAJOR GENERAL JIMMIE O. KEENAN, CHIEF, U.S. ARMY NURSE CORPS**

Chairman INOUYE. Thank you very much, Admiral.

Now, may I call on General Keenan.

General KEENAN. Chairman Inouye, Vice Chairman Cochran, it is our honor to speak before you today on behalf of the nearly 40,000 Active, Reserve, and National Guard officers, noncommissioned officers, enlisted, and civilians that represent Army nursing.

Nurses have a proud history of more than 236 years of standing shoulder-to-shoulder with and caring for this Nation's warriors. We've done this in every conflict, from the dawning days of the American Revolution, to our current operations in Afghanistan. The Army Nurse Corps remains dedicated to America's sons and daughters who selflessly place themselves in harms way to defend this Nation.

I'd like to share with you today a story from Captain Bujak. She's one of our Army intensive care unit (ICU) nurses. She was deployed to Iraq in 2009. Captain Bujak describes her experience with the patient she cared for in theater and later met back in the United States.

"During my deployment to Iraq, I took care of numerous patients, from servicemembers, to contractors, to local nationals. Two months into my deployment, our ICU received a critically injured soldier from a rocket-propelled grenade (RPG) attack. From the moment he arrived, nurses, physicians, medics on duty came together and worked as a team. He was fighting for his life, and we were fighting with him. He was stabilized and was later evacuated back to United States.

"Fast forward 2½ years. After the U.S. Army Medical Command (MEDCOM) change of command ceremony, I saw a familiar face, a face I've never forgotten. It was our soldier from Baghdad, wearing ACUs, and walking up the stairs on his prosthetics. I was honored to be able to introduce myself and speak with him about those 2 days in Baghdad.

"Speaking with the man whom I had remembered fighting for his life, and now was preparing to leave other soldiers assigned to the warrior transition command is an amazing experience. I don't have to wonder any more about that soldier from 2½ years ago. Now, I know I completed my mission."

IMPROVE PATIENT CARE

We're a globally ready medical force. Within the last year, 483 of our nurses have deployed worldwide. We go with soldiers, airmen, sailors, and marines to save lives, support healing, and provide comfort. This is demonstrated by our medical management of the movement of critically injured patients in theater. The en route critical care nurse program is a joint Army, Navy, and Air Force endeavor, providing critical care transport capabilities on fixed- and rotary-wing evacuation platforms. This en route care program is a direct result of 10 years of caring for wounded warriors.

In addition to meeting demands, we continue to work to integrate our major initiatives to improve patient care. In February 2011, Army nursing began implementing a patient-centered outcomes focus care delivery system encompassing all delivery environments: In-patient, out-patient, and deployed. The patient caring touch system was designed to reduce clinical quality variance by adopting a set of internally and externally validated best practices. The patient caring touch system is a true enabler of our major healthcare initiative, patient-centered medical home. It enhances the quality of care delivered for America's sons and daughters.

Nurses are taking a leading role in the implementation of and partnership with the delivery of services that focus on wellness outside the treatment facility. We serve in Army wellness centers and provide lifestyle coaching, health education that focuses on the behaviors that lead to preventable diseases, empowering our beneficiaries to lead healthier lives.

As members of Army Medicine, we address the white space to impact the life space. Nurses are there at the many touch points of the comprehensive behavioral health system. We are integral in providing continuity and a standardized approach for our soldiers and families.

I envision the Army Nurse Corps' journey toward nursing excellence will continue. We in the Army Nurse Corps are dedicated to the compassionate and trusted healthcare that we provide to America's sons and daughters.

Chairman Inouye, Vice Chairman Cochran, we appreciate this opportunity to speak to you about Army nursing, and we also appreciate all of your support to Army nursing. I am very humbled and honored to represent the more than 40,000 men and women that comprise Army nursing, and also to serve as the 24th Chief of the Army Nurse Corps.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF MAJOR GENERAL JIMMIE O. KEENAN

INTRODUCTION

Chairman Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee: It is an honor and a great privilege to speak before you today on behalf of the nearly 40,000 Active component, Reserve component, and National Guard officers, noncommissioned officers, enlisted, and civilians that represent Army nursing. It has been your continued tremendous support that has enabled Army nursing, in support of Army Medicine, to provide exceptional care to those who bravely defend and protect our Nation.

Nurses have a proud history of more than 236 years of standing shoulder-to-shoulder with, and caring for this Nation's warriors. We have done so in every conflict from the dawning days of the American Revolution to our current operations in Afghanistan.

GLOBALLY READY NURSING SUPPORTING THE FORCE

The Army Nurse Corps (ANC) remains dedicated to America's sons and daughters who selflessly place themselves in harm's way to defend this Nation. They remain our priority, and Army nurses are an invaluable presence, with 483 Active Duty and Reserve component nurses engaged in military operations in support of Operation Enduring Freedom (OEF) and other missions worldwide in 2011.

I would like to share a story from Captain (CPT) Bujak, one of our nurses who deployed to Iraq, on a patient she cared for in theater and later met back in the United States.

"During my deployment to Iraq, I have taken care of numerous patients, from our servicemembers, contractors to local nationals. Each patient was unique and my fellow nurses, medics and I provided them with the best care we could deliver. Two months into my deployment, our intensive care unit (ICU) received a critically injured soldier from an rocket-propelled grenade (RPG) attack. Upon arrival to the emergency room (ER), he was quickly taken to the operating room and after couple hours of surgery, he was transferred to the ICU for recovery and stabilization. From the moment he arrived in the ICU, all of the nurses, physicians and medics on duty came together and worked as a team. Everyone was calm and focused, yet you could sense the concern, whether we can make a difference and get this soldier home. He was fighting for his life, and we were fighting with him. [The patient was stabilized and evacuated back to the United States].

"For the next couple of months, we would get updates from Walter Reed Army Medical Center on the status of 'our soldier', but once I redeployed back, I lost the ability to follow up. From time to time, I would reflect on that day, my teammates, the hard work and of course 'our soldier'. Two-and-a-half years later, after the Army Medical Command (MEDCOM) Change of Command ceremony, I saw a familiar face; a face I have never forgotten. It was 'our soldier' from Baghdad, wearing Army combat uniforms (ACUs) and walking up the stairs on his prosthetics. He looked as healthy and strong as any other soldier in the room. I was overcome with peace and joy. I was honored to be able to introduce myself to him and speak with him about those 2 days in Baghdad. Speaking with a man whom I remember fighting for his life and was now preparing to lead other soldiers assigned to the Warrior Transition Command is an amazing experience. I wanted to call the rest of my deployment ICU team and let them know 'We did make a difference'. I don't have to wonder anymore about that soldier from 2 years ago. Now I know, I completed my mission."

The ANC is dedicated to the care of our warriors and continues to incorporate lessons learned from supporting over a decade of war. We are structuring our capabilities and skill sets to meet the latest strategic imperatives of Army Medicine. Let me share with you several examples of how we are meeting the needs of the Army.

As a globally ready medical force, we go with the soldier, airman, sailor, and marine to save lives, support healing, and provide comfort. This is demonstrated by our medical management of the movement of critically injured patients in theater. The Enroute Critical Care Nurse Program (ECCN) is the direct result of 10 years of caring for wounded warriors. Its legacy is in the over-70-years of aero-medical evacuation. Enroute Care is the transport of critical patients via helicopter in theater. It is based on a research identified capabilities gap for the safe transportation of critically injured patients from point-of-injury (POI) to forward surgical resuscitation (Level II); from post-operative care Level II facilities to more definitive care at our Combat Support Hospitals (Level III); and from Level III facilities to the Strategic Evacuation platforms for transport to more definitive care in Europe and continental United States (CONUS). It encompasses strategically placed critical care nursing transport assets across the Combined Joint Operational Area—Afghanistan (CJOA–A).

The Army nurses providing this battlefield capability face many challenges. They must first meet the rigorous physical challenges required for the training and mission support. They must hold the 66H (8A) critical care nursing career field identifier and complete flight nurse training at the Joint En-route Care Course (JECC). The challenges to be overcome in training are minimal to the practice adaptations that must be made to provide in-flight care to critically wounded patient on life-support in the confined cabin of a rotary wing aircraft at altitude in hostile airspace, connected to an aircraft communication systems at night. Yet these nurses overcome these challenges, provide quality care under sub-optimal conditions and execute precision patient hand-offs between levels of care on the battlefield.

The ECCN program is a joint Army, Navy, and Air Force endeavor providing critical care transport capabilities on both fixed and rotary wing evacuation platforms. The Army ECCN personnel requirements are mission dependent. However, there are currently nine Army nurses and an Air Force Team of one Physician and two Certified Registered Nurse Anesthetists (CRNA) assigned to the mission. They are attached to aviations assets across the CJOA–A supporting the movement of critically ill and injured across the battle space. In the last calendar year, these flight nurses transported 1,192 patients between levels of care within the Afghan theater. Two hundred eighty-two (27.5 percent) of these transfers were United States service personnel; 303 (29.5 percent) were Afghan Security Forces; 41 (4.1 percent) were coalition partners; 336 (32.7 percent) were Afghan civilians; and 37 (3.1 percent) were detained personnel.

ECCN personnel do more than transport the critically ill or injured while in theater; they also ensure that they remain relevant and ready not only for themselves but insure their team is ready as well. Captain (CPT) Ritter and First Lieutenant (1LT) Bester are shining examples of this within their aviation companies, as they ensure sustained competence of the enlisted flight medics. They are truly integrated members of the MEDEVAC team with a vested interest in the team's collective mission success.

We have continued to develop full-spectrum capability to manage critical trauma patients in all environments responding to the Army's needs, broadening our scope across the battlefield, and consistently meeting unprecedented challenges while providing care to America's injured and ill sons and daughters. The first Trauma Nurse Course (Pilot course) was completed in February 2012, and 15 students completed an 18-week program at San Antonio Military Medical Center (SAMMC). The Trauma Nurse is a multifunctional Army Nurse with critical care theory, knowledge, and highly developed nursing expertise capable of optimizing patient outcomes. This nurse will have the foundation to care for patients across the continuum of care both in the emergency and intensive settings, and during patient movement regardless of the environment. This pilot is critical to determine the skill sets required to continue to be an agile and flexible medical force for our warriors.

In addition to the trauma skill set, the ANC is developing other clinical skills to meet the Army's current and future needs. One of our new initiatives is the development and utilization of Psychiatric Nurse Practitioners which will be adopted as an area of concentration (AOC) for the Army. The Army Psychiatric Nurse Practitioner provides the assessment and diagnosis of mental illness and any medical problem that may account for or exacerbate a mental illness. They treat mental illness through medication management and psychotherapy. Treatment also includes the appropriate ordering of diagnostic tests and medical consultation/referral when indicated.

Army Psychiatric Nurse Practitioners serve in as direct provider in the outpatient and inpatient behavioral health arena. Additional roles in a fixed facility include officer-in-charge of outpatient behavioral health clinics or the Chief of Department of Behavioral Health at a medical activity (MEDDAC) or medical center (MEDCEN). The senior Army Psychiatric Nurse Practitioner currently serves as the Psychiatric Nurse Practitioner Consultant to the Surgeon General (TSG). This senior Psychiatric Nurse Practitioner works with the other Behavioral Health Consultants to address behavioral health policy and procedures.

Army Psychiatric Nurse Practitioners have deployed since the beginning of the Global War on Terrorism primarily to combat operational stress control (COSC) units, but also to Combat Support Hospital (CSH) in support of detainee care missions. Psychiatric Nurse Practitioners provided care to detainees and the soldiers, sailors, airman, and marines assigned to this mission. Army Psychiatric Nurse Practitioners have served as commander(s) of COSC unit(s) in Iraq and Afghanistan.

One provider, Colonel (COL) Yarber, served as the Chief of Behavioral Health for a detainee care mission in Iraq for more than 20,000 detainees and military/civilian support. Upon redeployment, he provided full-time direct outpatient care and served as the officer-in-charge (OIC) for a 3-week intensive outpatient post-traumatic stress disorder (PTSD) treatment program (Fort Hood). Consequently, he was selected to serve as the OIC for the Outpatient Behavioral Health Clinic at Fort Hood while serving as the Behavioral Health Care manager for more than 1,000 soldiers and civilians identified as "high risk" after the November 5, 2009 SRP shooting incident at Fort Hood. He managed the ongoing assessment and coordinated care as required for both soldiers and civilians. Later he was selected to serve as the Chief, Department of Behavioral Health and subsequently deployed in support of OEF. COL Yarber is the Consultant to the Surgeon General for Psychiatric Nurse Practitioners, and is a shining example of our specialty addressing behavioral health needs of our warriors.

Despite our efforts in theater, working with our coalition partners, the journey of our wounded warriors does not end in theater. Army Nurse case managers have been engaged in warrior care efforts since June 2003, when as a result of the wars in Iraq and Afghanistan, the demand for support and assistance for wounded, ill, and injured servicemembers began increasing exponentially. The Warrior Care and Transition Program has continued to make improvements to warrior care and nurse case managers have been at the forefront of those improvements. In December 2011, the Warrior Transition Command published the Comprehensive Transition Plan Policy and Execution Guidance. The comprehensive transition plan provides a tool that supports a soldier's goals to heal and successfully transition back to the force or to separate from the Army as a Veteran.

The primary role of the nurse case manager is to assist each wounded, ill, or injured soldier in the development of personal goals, and then to oversee the coordination of his clinical care to ensure achievement of these goals. Nurse case managers are at the forefront of care managed by Triad of Care teams (which are comprised of a nurse case manager, primary care manager, and a squad leader or platoon sergeant), planned with the input of an interdisciplinary team, and outcomes focused on return to duty and the creation of informed and prepared Veterans who are armed and confident as they begin a new life out of uniform. Today, the Army has more than 500 nurse case managers assisting a warrior transition unit population of nearly 10,000 wounded, ill, and injured soldiers. Case management efforts have facilitated the transition of 51 percent of this population back to the force.

While our warrior transition units focus on our most severely wounded, ill, and injured soldiers, the number of soldiers requiring care for conditions that result in a medically nondeployable condition continues to grow. We recognized that there is a value add to provide this group of soldiers with nurse case managers in order to maintain a force that is ready to fight. The result has been the development of Medical Management Centers to facilitate a rapid return to the force of these soldiers. We have aligned Nurse Case Managers with our combat units in garrison to work with teams of Licensed Practical Nurse (LPN) Care Coordinators to quickly identify and coordinate care for our "medically not ready" soldiers. These are soldiers who have temporary profiles for ongoing medical conditions that will take 30 days or greater to resolve. The Nurse Case Managers and LPN Care Coordinators partner with the soldier, the soldier's unit and the patient-centered medical home (PCMH) team to develop and execute a soldier-centered plan of care. This plan of care focuses treatment to return the soldier to full medical readiness as soon as the soldier is able. When a full return to duty is not possible, the nurse case manager facilitates the soldier's care and transition through the Integrated Disability Evaluation System (IDES).

Our effort toward ensuring a globally ready medical force was further realized with the assignment of a senior nurse at U.S. Army Africa. As the first Chief Nurse for U.S. Army Africa, COL Armstrong is responsible for establishing nursing's role in support of the DOD's newest command. This includes researching the "State of Nursing" in 55 African nations, ascertaining the medical activities of governmental/ nongovernmental agencies to eliminate any overlap of Army programs, and serving as a medical "strategist" to identify opportunities for future engagements. Other activities include serving as a clinical expert and facilitator for military to military medical exchanges, surveying host nation medical facilities, and ensuring that personnel have the appropriate credentials for all Army-led medical missions on the continent.

COL Armstrong also served as the Surgeon for Joint Task Force (JTF) Odyssey Guard in support of Libya during its "Arab Spring" uprising. As the senior medical advisor to the JTF Commander, COL Armstrong and her staff played a key role in the joint planning and oversight of ground, sea, and air medical assets, coordinated the medical evacuation of 26 Libyan war wounded to facilities in the United States and Europe, and supported the re-establishment of the United States Embassy in Tripoli.

ENHANCING THE CARE EXPERIENCE

In February 2011, Army nursing began implementing a patient-centered, outcomes focused care delivery system encompassing all care delivery environments; inpatient, outpatient, and deployed. The Patient Caring Touch System (PCTS) was designed to reduce clinical quality variance by adopting a set of internally and externally validated best practices. PCTS swept across Army Medicine, and the last facility completed implementation in January 2012. PCTS is a key enabler of Army Medicine's Culture of Trust and nests in all of Army Medicine's initiatives. PCTS is enhancing the quality-of-care delivery for America's sons and daughters.

PCTS has improved communication and multidisciplinary collaboration and has created an increased demand and expanded use of multidisciplinary rounds (Patient Advocacy—Care Teams). In one large Medical Department Activity (MEDDAC), a provider was concerned with gaps that he saw in the discharge planning process that he had on a one of his wards. He said "I think that all would agree that the PCTS has been a huge success in improving physician/nurse communication. Personally, I love being able to round with the nurse taking care of my patients and have already seen improvements with accountability and performance . . . Mr. F. approached me this morning with a fantastic way to extend this same system of communication to discharge planning." This provider facilitated the necessary changes, partnering with nurses to ensure that the patient remained the focus of

the change. Several facilities have reported that bedside report, hourly rounding, and multidisciplinary rounding are so much a part of the routine that they cannot recall a time when it was not part of their communication process. During one facility site visit, when the team walked into the patient room, the patient was overheard to say, "Hello Care Team! It is so good to see your familiar faces—time to update my white board and for me to tell you what kind of day I had and what my priorities are tonight!"

For the first time in the history of Army nursing, we have outcome data obtained through the systematic tracking and reporting of 10 priority metrics, benchmarked against national standards. (Evidence-Based Practices—Optimized Performance). This has served to increase individual and collective accountability, and the use of evidence-based practices. In three of our largest military treatment facilities (MTFs) we were having challenges in pain reassessment—we knew that it was being done, but it was not being documented. Pain reassessment (in the inpatient) and pain assessment (in the outpatient) environment is 1 of the 10 priority metrics of PCTS. It is also a focus area for the Pain Management Task Force, the Joint Commission, etc. We found that just by tracking this metric, there has been a significant improvement (on average 50–90 percent compliance within the first 60 days) to 98-percent compliance within 90 days. Staff in these facilities were very excited, and instituted simple, cost neutral interventions such as using a medication administration buddy system, door signs in the shape of a clock, use of hourly rounds, and pager systems to support pain reassessment processes. In the outpatient areas, visual cues regarding the "fifth vital sign," referring to perceived pain, were created, and a modified buddy system was used to support pain assessment processes. These interventions have supported pain reassessment rates and assessment rates of 98–100 percent which have a positive outcome impact for patients. We are seeing decreased rates of falls with injury, medication errors and medication errors with injury since implementation of PCTS, and are continuing to monitor these data monthly.

PCTS increases the continuity of care by decreasing staff absenteeism and reducing staff churn. We have been tracking facility absentee rates monthly since PCTS was implemented, and have noted a decrease in many facilities. As part of PCTS, we conduct Practice Environment Scale of the Nursing Work Index (PES–NWI) surveys, completing one in January 2011 and one in July 2011. When we compared the data for intent to leave, there saw improvements in the data postimplementation. These data are very promising and warrant close evaluation. We will continue to monitor absentee rates, and we will conduct the survey again in April 2012. We expect this trend continue and to be able to link these data to PCTS.

PCTS increases nurse engagement which positively impacts patient outcomes. (Healthy Work Environments—Shared Accountability) At a recent site visit to a MTF a registered nurse when asked why she was actively engaged in PCTS said, " . . . for the first time in a long time I feel that what I have to say matters, and that nurses are seen as an equal part of the healthcare team—that feels good." One nurse said, "PCTS has given the practice of nursing back to nurses—others used to tell us what we could and could not do and we let them—we have to know what our scope of practice is and PCTS has made us have to be much smarter about it."

Facilities across Army Medicine have implemented shared accountability in the development of unit practice councils and facility nurse practice councils. This has allowed each to create real time examination of practice, to ensure that it is standards based, innovative and current, and aligns with the ANA Standards of Practice and Professional Performance and Code of Ethics. Several of the products from these councils are being prepared for review by the Army Nurse Corps Practice Council (ANPC) for consideration as an ANC-wide best practice. The ANPC has fielded two Army nursing-wide clinical practice guidelines since PCTS implementation; patient falls prevention and nursing hourly rounding. Both directly support one of the 10 priority outcome based metrics and illustrate another first for Army nursing.

PCTS supports licensed personnel to perform at their fullest scope of their licensure, and for nonlicensed personnel to perform at their fullest scope of competence. In a recent site visit, a 68D Noncommissioned Officer shared that he is the Core Component Leader for Shared Accountability, and is the leader for the Unit Practice Councils. He said that before PCTS, he would never have been able to have this role. He now has a better understanding of licensed practice, and the scope of competence of unlicensed personnel. He believes that this has increased the understanding of exactly what the 68D (operating room technician) can do and what the 68W (medic can do). This has really helped all across the facility—medics are doing more than just taking vital signs. This makes the medics feel valued in their role in the clinics.

PCTS ensures that our patients know that their best interests drive all of our care decisions, and that they are part of those decisions. As PCTS moves into sustainment, we expect that we will continue to have positive impacts in each of the 10 priority metrics and that these results will enable similar changes in Army Medicine.

Another healthcare initiative is the patient-centered medical home (PCMH). Nursing engagement and commitment to in the PCMH transformation process have been impressive. The PCMH transformation process has been a grassroots and top driven endeavor from the regional medical command level down to each individual MTF to provide comprehensive and continuous healthcare to our beneficiaries.

Nurses have been on the forefront of PCMH transformation and while many had unique PCMH nursing stories the following were ones that are the most memorable. Major (MAJ) Gray, Officer-In-Charge Military Readiness Clinic and Family Nurse Practitioner (FNP) states that the continuity of care that PCMH provides has allowed her, as an FNP, to put patients back into the center of care and allowed patients to trust that the system works. One story she shared was how a wounded warrior was able to decrease his pain meds from four to one over the past 6 to 9 months. She stated that continuity of care between herself and the patient allowed the patient to trust that "you will take care of me". For the nurses that work in her clinic, "the spark has been reignited . . . you can see it in their eyes" and in the nursing care that they deliver. Often the nurses remark that, "This is why I got into nursing—this is why I went to nursing school. PCMH helps me to make a difference and helps me to improve my patient's lives." One of MAJ Gray's nurse's, Ms. Ingram, a licensed vocational nurse (LVN), states that PCMH allows her to be considered a nursing professional. She didn't feel as if others regarded her as a professional because she was a LVN. She stated, "Now my patients know me and the team. We have a personal relationship. They feel like we care, and we do. When we ask them how they are doing, they tell us. They trust the system. Even when I am not at work, like the other day I was at Wal-Mart after work, my patient call out to me, 'Hey! You are my nurse!' PCMH is not about numbers but about our relationship with our patients."

Nurse Case Managers play a large role in the coordination of all phases of patient care in this system. Nurse case managers are having a direct impact on savings within our PCMHs. The case manager's early identification and care coordination of high-risk patients reduces hospitalizations and emergency room visits, improves medication adherence and closes care gaps that trigger or exacerbate health conditions. The return on investment of embedding Nurse Case Managers into the Primary Care Clinics and the Medical Management Centers directly supports the MEDCOM's initiatives.

We recognized a need to educate Army Nurse Case Managers in all practice settings. In November 2011, we launched a new nurse case management qualification course directed toward the novice case manager but open to any case manager joining the Army Medical Department (AMEDD) team. Military graduates are awarded the M9 identifier. Additionally, graduates should have the core skills to sit and pass a national certification exam once they have obtained the clinical practice hours to be eligible to take either the certified case manager (CCM) or American Nurses Credentialing Center (ANCC) exam.

During the week of February 6, 44 nurse case management students assigned to warrior transition units, community-based warrior transition units, and PCMH practice settings worked alongside warrior transition unit squad leaders and platoon sergeants at the resident course in San Antonio, Texas to practice skills in communication and collaboration. The case managers watched a movie outlining the journey of four Operation Iraqi Freedom soldiers and their families from deployment through recovery. They formed teams and developed care plans using the Comprehensive Transition Plan process for one of the four soldiers and presented it to the group. That same week, a group of 28 nurses participated in guided discussions on effective documentation and the integrated disability evaluation system from around the country. They used Defense Connect Online technology to facilitate their discussion, share ideas and continue to develop a standard skills set as case managers.

The Army also recognized a need for ongoing professional development of our nursing case managers. To facilitate the education of Supervisor Nurse Case Managers, the Warrior Transition Command developed a 4.5 day Clinical Leader Orientation Program. This program focuses on key leader competencies and provides attendees with 13 hours of continuing education. In August of this year, MAJ Steimle will begin a course of study to obtain a Master of Science in Nursing Case Management. She is our first ANC officer to receive funded graduate education support for a Masters in case management. Beginning in fiscal year 2013, we have pro-

grammed funds to send two nurses to graduate case management programs annually.

Under the direction of Ms. Roberts, the Womack Army Medical Center Medical Management team developed a process to examine the essential components of appropriately sized caseloads for case managers in MTFs. The team developed a model that not only takes into account patient/family acuity and nurse case manager abilities but also provides for capture of quality metrics, return on investment data, utilization management data, and peer review.

The result was the development of the Nurse Case Manager Workload and Acuity Tool. This process improvement initiative has had a statistically significant and measurable impact on the role of case management in patient care, individual and department goal-setting, the supervisory process, and performance expectation. The MEDCOM has recognized this initiative as a best practice model in caseload calculation and the resulting quality implications. As a result the tool is being tested Army-wide.

As we expand the utilization of Nurse Case Managers, so, too, do savings generated by their efforts. The case manager's early identification and care coordination of high-risk patients reduces hospitalizations and emergency room visits of the chronically ill, improves medication adherence, return's soldiers to Full Medical Readiness and closes care gaps that trigger or exacerbate health conditions.

UNITY OF EFFORT THROUGH JOINT TEAMS AND COALITION PARTNERSHIPS

As they have selflessly served in the past, Army nurses stand today on freedom's frontiers in Afghanistan supporting the International Security Assistance Forces (ISAF), our partners in the North Atlantic Treaty Organization (NATO), and as members of United States Forces—Afghanistan. One hundred thirty-six Army nurses from all three Army components make up the Army Nursing Care Team—Afghanistan. Ninety-nine represent the Active component, 30 represent the U.S. Army Reserves, and two represent the Army National Guard. These nurses are delivering world class care to our warriors, our NATO partners, Afghan Security Forces, and the people of Afghanistan. They provide care in 39 different facility-based locations, at the four distinct roles in the spectrum of battlefield care, at the five theater regional command levels, and along the entire continuum of combat care—from point-of-injury to evacuation from the theater of operation. This care includes reception of Afghan casualties, treatment, and responsible discharge planning to the Afghan National Care System.

Multinational partnerships are part of the shared vision for a stable, independent, sovereign Afghanistan. This includes the coordinated application of all of the available instruments of power to aid in stabilizing and legitimizing the Afghan system. Partner countries engage in activities to win the hearts and minds of the Afghans and a peaceful end to war and enhance efforts toward national stability. This includes helping the Afghan people meet their basic need for clean food and water, health and security; while simultaneously ensuring the health and welfare of the International Security Assistance Forces. In September 2011, 87 members of the 10th Combat Support Hospital from Fort Carson Colorado joined forces with the 208th Field Hospital and a Danish Forward Surgical Teams to provide comprehensive Role 3 combat health service support at Camp Bastion in Helmand Province, Afghanistan.

This first ever joint U.S. Army and UK Army health service delivery partnership has been an innovation in the responsiveness, flexibility, adaptability, and battlefield capabilities supporting coalition forces, Afghan Security Forces, and providing much needed trauma support for severely injured Afghan civilians. While the partnership is largely about the enhanced healthcare capabilities and building reliance on the Afghan system of care, it has also transformed how we train, deploy, and sustain medical forces in a combat zone.

The 87 members of the 10th Combat Support Hospital, including 43 Army Nurses, began their road to war by joining 143 British counterparts from the 208th Field Hospital to take part in a 2-week Mission Support Validation (MSV) Hospital Exercise (HOSPEX) in Strensall, England. The assembled team was specifically formed to provide enhanced polytrauma surgical capabilities to care for the emerging complexities of blast injuries from improvised explosives devices (IEDs) encountered by coalition forces during dismounted patrols in south and southwest Afghanistan. This first ever US/UK joint training exercise conducted in Strensall, England was a model for mission specific team training for deployed operation. During this HOSPEX, the newly established team was collectively exposed to the mission expectations and facilities at Camp Bastion, including every aspect of care from casualty reception to evacuation. Forming teams with their specific practice areas the pri-

mary focus was on team development, familiarizing the team with the equipment and processes of care. This collaborative environment provided the healthcare teams with the opportunity to share evidence based clinical practice guidelines, train on procedures, and rehearse trauma procedures prior to deploying to ensure that everybody on the team knew, understood, and was validated with every protocol under combat like conditions prior to deploying.

The joint US/UK support mission at Bastion/Camp Leatherneck is a critical one and the 43 Army nurses assigned there play an essential role in the combat health service support to the more than 54,650 coalition soldiers at risk within Regional Commands South-West and West. They provide compassionate nursing care in the 6-bed emergency/trauma suite, the operating theater, the 16-bed intensive care unit, and the 50-bed intermediate care ward. And while they do so they are innovating nursing practice, streamlining the discharge planning process, and supporting the Afghan healthcare system.

HEALTH SERVICE SUPPORT

The ANC is fully engaged in joint operations with our sister services. One example of the synergy we have created with dedicated effort of the Navy and the Air Force is the Joint Theater Trauma System (JTTS). The ANC has been providing officers to function as trauma nurse coordinators in the JTTS since 2004. These critical care nurses serve jointly with Navy, Air Force, and Canadian nurses to collect trauma data in-theater and conduct performance improvement at the three U.S.-staffed military hospitals. In the past year, six Army nurses have filled this role in southern and eastern Afghanistan, working closely with British forces and the air medical evacuation units in those regions. In 2011, these nurses entered more than 2,000 records in the military trauma registry, documenting the medical care given to all casualties, military and host nation, cared for by Coalition forces from point-of-injury to hospital discharge.

In addition to deployed personnel, the ANC has recently positioned two field grade officers at the Joint Trauma System in San Antonio. These officers were assigned following postgraduate fellowships at the RAND Corporation. Using the analytic skills learned in their training, they have completed system-wide performance improvement and evaluation projects on a variety of urgent trauma issues, including pre-hospital medical evacuation, blood product utilization, en route critical care, clinical practice guidelines, and surgical complications. Whether it's optimizing care at the bedside in-theater, ensuring the best care at each stop on a wounded warrior's journey home, or at the enterprise level monitoring delivery of the most current evidence-based care, nurses continue to be integral parts of the trauma system of care.

Another successful example of joint operations is the Walter Reed National Military Medical Center (WRNMMC) Inpatient Traumatic Brain Initiative/Post-Traumatic Stress Disorder Unit (TBI/PTSD). The TBI/PTSD unit, (7 East) is a 6-bed acute care unit with medical/surgical and behavioral health capability. Conceptually, it is a short stay unit (2–3 weeks) where functional deficits are evaluated among wounded and injured servicemembers, while simultaneously engaging in early interventions for TBI complications. This multidisciplinary approach is a major collaborative effort among nurses, therapists, physicians, patients, and family members, and it continues to be one of the essential pillars that navigate and shape care provided to this complex population.

One of the success stories from this venture was patient J.B. who initially came to 7 East with increasing behavioral issues that prevented his ability to live unassisted in the community after sustaining injuries from an IED blast and a subsequent automobile accident. After multiple failed hospitalizations, the family turned to WRNMMC for help. The patient's recovery improved with highly specialized collaborative treatment interventions including medication adjustments and behavioral therapy. A full article was published on this patient's case in the September 2011 Washingtonian Magazine.

We are following the Institute of Medicine's (IOM) recommendation to prepare and enable nurses to lead change and advance health through the assignment of Army nurses to warrior transition units and our focus on public health and behavioral health. I believe that my assignment as Commander of USA Public Health Command shows that the Army recognizes the importance of nursing in advancing health from a healthcare system to a system of health.

In America, we in DOD spend an average of a 100 minutes each year with our healthcare team. The other 525,500 minutes of the year our patients are not with us—the same amount of time our environment influences the behaviors that determine our health occur. Nurses are taking a leading role in the implementation of

and partnership with the delivery of services that focus on wellness outside the treatment facility. They serve in Army Wellness Centers and provide lifestyle coaching and health education that focus on the behaviors that lead to the manifestation of diseases (e.g., hypertension, diabetes, cholesterol) thus reducing dependency on treatment and empowering them to lead healthier lives.

Another initiative to support America's sons and daughters wellness outside the treatment facility is the Army healthy weight campaign—a comprehensive framework to increase physical activity, redesign how we eat and the environments that support both. It is a plan to achieve a unified vision of an Army family leading the Nation in achieving and maintaining a healthy weight through surveillance, clinical prevention, and community prevention. This campaign supports two strategic priorities of the National Prevention Strategy, signed by President Obama on June 16, 2011. Public health executive nurse leaders were instrumental in the development of this National Prevention Strategy, and continue to serve as national leaders in the implementation of this roadmap for our Nation's health.

When prevention is insufficient to protect our warriors from health threats across the globe, the USA Public Health Command created the structure for enhanced public health nursing capability that provides centralized oversight with decentralized health protection and wellness services world-wide. This public health nursing capability exceeded all expectations when tested in September as part of the Rabies Response Team efforts when more than 9,000 warriors, DOD civilians and contractors across the globe received medical screening and treatment services—the majority within 72 hours of notification. Initially, Army Public Health nurses reached out to these warriors during the Labor Day holiday to provide the human touch that allayed their fears and synchronized follow-on care regardless of their remoteness to military healthcare facilities.

The ANC is also engaged with the latest initiatives in the AMEDD. Recognizing the magnitude and impact of women's health, the Surgeon General identified the need for a Women's Health Task Force (WHTF) to evaluate issues faced by female soldiers both in theater and garrison. We have several Army nurses assigned to the task force, the Executive Officer MAJ Perata is an obstetrics/gynecology nurse. The Task Force is currently working on a number of initiatives for Women Health, to include research and development on the fit and functionality of uniform and protective gear for female body proportions, research of the psychosocial affects of combat on women, and to investigate the integration of Service policies on sexual assault prevention and response programs in theater. Given the large percentage of women in our Army, we fully support the TSG initiatives in women's health.

## DEVELOPMENT OF NURSING LEADERS

The Nurse Corps is dedicated to the support of lifelong learning by providing numerous continuing education opportunities. We created the Nursing Leaders' Academy to provide the developmental leadership skills within our nursing officers to mold them into future healthcare leaders. We send Nurse Corps officers for advanced degrees in clinical, research, and administrative degree programs to build our profession. We also support contact hours for lectures, conferences, and seminars to maintain our officer's licensure.

We believe that providing a residency program to our novice nurses is essential to the training of new graduates. We implemented a Clinical Nurse Transition Program which last 6 months and prepares our novice nurses for clinical practice. This program, in its third year, has resulted in an increase in our novice nurses intent to stay in the ANC beyond their initial obligation as well as favorable comments from patient surveys. We also have developed a Clinical Nurse Leader pilot program and support clinical residency programs for a number of our graduate education programs and clinical specialty programs.

The ANC is also following IOM's recommendation to increase the number of nurses with a doctorate. Our advanced practice nurses will possess a Doctor of Nursing Practice (DNP) as the standard degree in our training and education programs by 2015. We currently fund five nurses a year through our robust Long-Term Health Education and Training Program for Ph.D. studies.

An example of one of our recent Ph.D. students is MAJ Yost who earned her Ph.D. degree in nursing from the University of Virginia. Her dissertation was titled, "Qigong as a Novel Intervention for Service Members With Mild Traumatic Brain Injury". The purpose of the study was to determine the level of interest in and perceived benefit of a program of qigong, a Chinese health system that has been practiced for thousands of years. In addition to perceived improvements in quality of life and pain management, the active meditative movements of qigong allowed servicemembers to enjoy benefits of meditation without experiencing troublesome

flashbacks commonly seen in those with mild traumatic brain injury (mTBI) and comorbid PTSD.

The ANC also values the contributions of our Department of the Army civilian nurse leaders. Our consultant for Nursing Research, Dr. Loan, is one of our many valued civilian members. Dr. Loan, Ph.D., RNC, just completed her second year as the Consultant to the Surgeon General for Nursing Research. Her recent contributions include: AMSUS November 2011 Speaker: Army Nursing Research Evidence-Based Priorities Breakout Session; Nursing Research Advisory Board Meeting November 2011 to establish 2012 EBP/Research priorities. She recently was published in the AMEDD Journal related to the transformation from Nursing Research Service to Centers for Nursing Science and Clinical Inquiry October–December 2011. Dr. Loan was inducted into the Fellows of the American Academy of Nursing (FAAN) in October 2011.

The total civilian nurse (registered nurse (RN), licensed practical nurse (LPN), and certified nursing assistant (CNA)) inventory constitutes 23 percent of the MEDCOM civilian workforce and 34 percent of the civilian medical occupations in Career Program 53—Medical. Civilian nurses work in all nursing care settings to promote readiness, health, and wellness of soldiers, their family members, retirees, and other eligible beneficiaries across the lifespan. It is the dedicated civilian nurse workforce that enables and complements the ANC to meet full mission requirements by serving as the fibers in the network of continuity at fixed facilities. Civilian Nurse Career development has been on the forefront of the Nurse Corps agenda for the past decade in support of integrated Talent Management and Leader Development. This integration fosters development of adaptive leaders and further building of highly trained, educated, and confident leaders and followers to construct required high-performing integrated teams.

The ANC has diligently worked to establish sustainable career life-cycle management strategies such as Student Loan Repayment Program, Accelerated Training and Promotion Program, standardized nurse titling, nurse competencies, and nursing position descriptions (some dating back to the 1970s), and Career Maps which have either been implemented or are in progress. For example, the student loan repayment program has supported 955 individuals with 299 of them supported for multiple years. This has resulted in 85-percent retention rate of these for retention purposes and improved educational status of the workforce. The Accelerated Training Program allows for new RN placement and accelerated promotion of two grades within 1 year with successful completion of each phase of training. Fifty-three personnel have successfully completed this program which has resulted in advancing academic accomplishments and career entry for nursing personnel. The DOD Civilian Healthcare Occupations Sustainment Project (CHOSP) has been a multiphased initiative that has resulted in updated qualification standards for civilian RN and LPN nursing positions and the creation of an advanced practice registered nurse (APRN) standard to support a relevant and dynamic workforce. These, along with standardized titling and competencies, promote value by reducing unnecessary variance leveraging the full capabilities of a trained workforce, and enhancing unity of effort. The feasibility and functionality of Professional Standards Boards (PSBs) continue to be explored as a culmination of the nurse career development and progression.

I envision the ANC will continue compassionate care and innovative practice in healthcare. Through the PCTS and the PCMH we will consistently and reliability meet the needs of our patients and their families. We will continue to grow and develop our nurses to fill the gaps in our health system while anticipating future needs. The ANC is positioned for the changes in our Army and in Military Medicine. We will continue to embrace our proud past, engage the present challenges, and envision a future of seamless improvement in quality care. We in Army nursing are truly honored to care for America's sons and daughters. Senator Inouye, Vice Chairman Cochran, and distinguished members of the subcommittee, thanks again for the opportunity to highlight Army nursing. I am humbled and honored to represent the more than 40,000 men and women who comprise Army nursing and serve as the 24th Chief of the Army Nurse Corps.

Chairman INOUYE. Thank you very much, General Keenan. Before I proceed, I'd like to assure all of you that your full statements are part of the record, and then we will be submitting our more technical questions for your responses in writing.

CHIEF NURSE CORPS RANK

I have one question with two parts: Any comments you'd like to make on the reduction of rank from 08 to 07, as Chief of new nurses? Do you do have any problems with recruiting and retention?

May I start with the Admiral?

Admiral NIEMYER. Thank you, Senator. On the first question, first and foremost, we are very grateful for your continued support of leadership opportunities for nurses in both the profession of nursing as well as military nursing.

I have had the unique experience among my peers to serve as a one star. When I was selected as a one star, it gave me the opportunity to have a position that I believe was extremely competitive in a leadership role, overseeing the TRICARE contract for the western region, a $17 billion contract. I believe that opportunities like that, at the one-star level, could, in fact, make our nurses continue to be competitive in a selection process for a second star.

NURSE RECRUITMENT AND RETENTION

I do not disagree with the efficiencies that have been directed by the Department. I would like to say that having an important leadership path and competitive support for nurses getting exposure to various assignments that will, in fact, make them competitive both at the rank of selection for one star as well as two is extremely important. And I think as we see a group of nurses coming forth, who have the same battle-tested expertise, fleet assignments and assignments with the Marine Corps, we will continue to grow a very competitive group of nurses who can compete in any environment.

In the second question, recruitment and retention, we are doing extremely well in both of those areas in the Navy Nurse Corps. We have met our recruiting goals in the Active component for the last 6 years, and I believe that we have the right incentives with special pays and accession bonuses that you've been quite instrumental in helping us to attain. That has been extremely useful for us in our retention as well, with special pays for registered nurses and our advanced practice nurses. So, we are doing quite well.

We do recognize that there is a time where we may not have the same kind of economy, where we may see people leaving the military, and we look continually for programs and opportunities to continue that exposure to the military and develop our staff along the way, so that the choice will be retention and not movement to the civilian sector.

Thank you.

Chairman INOUYE. General Keenan.

General KEENAN. Yes, Sir. On the first question, I will tell you that I do agree with Lieutenant General Horoho. We have developed a very robust leadership development track in Army Medicine that truly allows our nurses to compete at any level or command. And with that, we want to thank you for your continued support to expand fair opportunities for us in military medicine to have those abilities to compete for those types of inmaterial command.

But, we do believe that with the leadership opportunities that we do have available in military medicine to compete for combat com-

mands, in combat support hospitals, we've had several nurses who have led combat support hospitals in Iraq and Afghanistan. We have Army nurses who have led at the level-two medical center level, and then we have the opportunities to command other branch and material areas. We believe there is a system in place that would support our progression.

Chairman INOUYE. Thank you very much.

General Siniscalchi.

General SINISCALCHI. Sir, first, I would like to thank you for your continued advocacy for nursing. Words just can't express how much we appreciate the value that you have placed on our profession. And regarding the two-star billets, you know, I have just been honored and blessed to serve at this rank, and it has served our Air Force Medical Service very well.

However, recognizing the need for efficiencies, the Air Force does support the Department's decision. However, until the legislation is changed, the Air Force will continue to fill this position of responsibility with the two-star.

And, Sir, in regards to your question on recruiting and retention, like my sister services, we also are doing very well in recruiting. However, the majority of our recruits are new nurses. They're new graduates. Novice nurses. We have great opportunities for them to advance professionally and to transition into their new profession and into military nursing.

The incentive special pay has helped a tremendous amount in our retention, and we do have professional opportunities for advanced academic education and for fellowships. Also like my partners, we are very excited about the opportunity to offer our nurses the new Director of Nursing Practice (DNP) program. We have the new graduate program at the Uniform Services University for mental health nurse practitioners. And so that is serving as an incentive for our nurses to stay. However, we do experience problems with retaining our clinical experts at the bedside, tableside and litter side, because of our constrained promotion opportunity.

But, I am very pleased to say that we have received tremendous support from the Air Force, and our sister services are supporting us in this endeavor. And so we continue to work with the Assistant Secretary of the Air Force for Manpower and Readiness, as well as the Office of the Secretary of Defense for Personnel and Readiness in exploring various policy options to help us correct the great constraints that we currently have.

So, we are very hopeful that we will be able to open the aperture for promotion and have the grade that we need at the field-grade rank, so that we can retain the clinical experts that we need in order to grow and mentor our novice nurses coming up through the ranks.

Chairman INOUYE. Thank you very much.

General SINISCALCHI. Thank you, Mr. Chairman.

Chairman INOUYE. I asked that question, because as you're aware, in the civilian sector, nursing shortage is a major problem, and we're trying our best to resolve that, but it's very expensive. Thank you very much.

The Vice Chairman.

Senator COCHRAN. Mr. Chairman, thank you.

I may ask this question of all of our witnesses. We have information about a new system called "Care Case Manager System" that was implemented in my State at Keesler Air Force Base Hospital, and it involves supporting patients with a communication case manager at both Keesler and the VA Hospital in Biloxi. I'm told that this has really helped define needs in a unique way, that the Care Case Manager System that was implemented at Keesler is innovative and is a big success.

I wonder if you've heard about this, or if this is something that is being replicated at other treatment centers or hospitals around the country.

I'll ask each of you.

General KEENAN. Yes, Sir. We do have nurse case management in the Army, and actually, we've had case management. Historically, it was in disease management. So, if you looked at asthma or high-risk disease processes. In 2007, when we stood up the warrior transition units, one of the key components that we found was missing in the care of our wounded, ill, and injured soldiers was case management, because they really provided that holistic support to the soldier and their family to coordinate their care.

From our lessons learned with case management, and also with our patient caring touch system, and how we have now focused on our major platform of our patient-centered medical home, we have implemented not only case management in our warrior transition units, but we've also implemented it in our patient-centered medical homes, also in our embedded behavioral health teams that support our brigade combat teams, as well as in our medical management centers for our soldiers, and we truly believe, as you do, Sir, that this really empowers our patients. It ensures they're getting quality safe care, and it coordinates their care, and it gives them a safety net, someone that they can go to, they can help them understand what is going on in the care process.

We really envision in Army nursing the next step is in our Army wellness centers when we talk about the white space, the 525,500 minutes that people are not directly in our purview, our care, and our Movement Tracking System (MTS), that this is really going to give us the ability to affect diet, exercise, well-being for their mental and spiritual health. So, we totally embrace the concept of our nurse case managers and truly see it as an enabler for all we do, not only in Army nursing but also in Army Medicine.

Senator COCHRAN. Thank you.

Admiral Niemyer.

Admiral NIEMYER. Thank you, Senator.

Nurse case management is the very fabric of communication and integration for across the enterprise for our wounded warriors, for our family members, from pediatrics, to geriatrics, to our wounded warriors in between. And it is the weaving together of a multidisciplinary effort to take a holistic approach with a patient, including that transition, perhaps, out of our system, as you recognized, into the VA. The Federal recovery coordinators for the VA are in our system, are in our MTS, to assist with that warm handoff, so we don't lose a patient in that transition.

NURSE CASE MANAGEMENT

Nurse case management, as well as nonmedical case management, is so important to helping our patients guide through the multitude of administrative systems they have as wounded warriors. So we're equally as engaged and partnered in ensuring that all of our facilities have robust case management programs across the enterprise.

Senator COCHRAN. Thank you. General Siniscalchi.

General SINISCALCHI. Yes, Sir. Keesler Air Force Base is a great example. So, I'd like to thank you for sharing that.

Actually, once they initiated the program with case management, they were able to notice a difference within the first 6 months. And we've seen significant impact as we've moved forward the Air Force's pathway to patient-centered medical home has been the family health initiative. And within that staffing model, we laid in case managers as well as disease managers, but we found the impact of the role of the case manager has been phenomenal with this process. We've seen decreased emergency room and urgent care visits. We've seen increased provider as well as patient satisfaction. Better communication amongst the team, the family health team, as well as increased communication with the nurse, the technicians, and the patient. And, you know, in essence, the case manager has really been able to step in and navigate, help the patient navigate through the healthcare continuum.

So, if I may share just a few data points, as we've been trying to actually monitor and track the success of our family health initiative and the role of the case manager in that. The case managers have coordinated care for more than 66,000 patients in fiscal year 2011. And this actually was an increase from fiscal year 2010 of more than 6,000. And we have seen their coordinated care with our wounded warriors. Their care has touched more than 3,200 since fiscal year 2011. So, they're having a very significant impact and a strategic reach across the healthcare continuum.

So, as we've tracked several data points, we found that in healthcare costs that the impact they're making has actually resulted in $2.6 million in savings. So, we've been very pleased with the initiative of putting the case management model and that role in our patient-centered medical home.

Thank you.

Senator COCHRAN. It's a very impressive report and we congratulate you on the initiative and also the leadership in all of our healthcare centers throughout the armed services.

Your leadership, all of you, is really remarkable. It sets the United States apart from every other country in the success that we've had in managing the care, delivering healthcare services to our men and women who have served, and have been injured, or become ill in the military service of our country. Thank you all.

ADDITIONAL COMMITTEE QUESTIONS

Chairman INOUYE. On behalf of the subcommittee, I thank the Surgeons General, and the Chief of the Nurses Corps, and we look forward to working with you in the coming months.

[The following questions were not asked at the hearing but were submitted to the Department of response subsequent to the hearing:]

QUESTIONS SUBMITTED TO GENERAL CHARLES B. GREEN

QUESTIONS SUBMITTED BY CHAIRMAN DANIEL K. INOUYE

*Question.* General Green, since 2003 the Nurse Corps Chief position for each of the Services has been authorized as a two-star billet. The Department recently sent over a legislative proposal that would reduce the Corps Chief position to the one-star level. What would be the negative effects on the Nurse Corps if the Chief positions were converted back to one-star billets?

Answer. A two-star billet, as the Nurse Corps Chief, has served the Air Force Medical Service well. Recognizing the need for efficiencies, the Air Force supports the Department of Defense's decision. Nurse Corps officers receiving in-depth professional development will complete well for two-star positions available in the Air Force Medical Service without the congressional mandate for the Corps Chief to be a two star. Until the legislation is changed, the Air Force will continue to fill this position of responsibility with a two star.

*Question.* The Department's fiscal year 2013 budget assumes $452 million in savings based on new TRICARE enrollment fees and increases in co-pays for prescription drugs. General Green, I understand that military leadership supports these changes, but what are you hearing from troops and their families? Do you believe this will impact recruiting?

Answer. Our retiree population actively shapes perceptions of the value of military service. Any action that discourages our retiree population can adversely impact recruiting activities. Healthcare benefits for Active Duty military personnel are minimally impacted under the current proposal. TRICARE standard caps will affect the small number of Active Duty family members not enrolled in Prime. Pharmacy co-pay increases only affect those who do not get their prescription filled at a military treatment facility. Although increases in healthcare fees may be perceived as a loss of benefit to our beneficiaries, the increases are not expected to negatively influence retention of Active Duty military personnel.

*Question.* General Green, I understand the Air Force has begun using vending machine-like kiosks on bases to help alleviate pharmacy wait times. What other initiatives are under way?

Answer. The most significant initiative underway to improve pharmacy operations and reduce wait times is the development and implementation of the pharmacy staffing model. The model helps us balance pharmacy manpower across the Air Force Medical Service (AFMS) based on workload. Changes in the long-term program using this model begin taking effect in fiscal year 2013, but we are also using it now to address the most egregious staffing imbalances with current year funding. The Air Force Manpower Agency has also recently begun conducting a formal manpower study to more precisely quantify pharmacy manpower requirements utilizing management engineering techniques. This study will result in a new official manpower standard for Air Force Pharmacy.

We are engaged in a continuing effort of sharing and implementing lessons learned from Air Force Smart Operations for the 21st Century (AFSO21) events (and other best practices) from site visits and regular communications with pharmacy leadership to optimize workflow and facility design. We are currently reviewing the results to ensure we are taking advantage of what we have learned already and targeting future efforts at expanding our knowledge base of best practices for application across Air Force pharmacies.

An additional system-wide initiative is the upgrade of pharmacy automation and patient queuing technology. We are working towards a full technology refresh Air Force Medical Service wide within the next 3 years. The new automation equipment will include telepharmacy capability, which allows remote review of prescriptions to assist pharmacies, particularly smaller ones, during their busiest times or when Active Duty pharmacists are deployed. Recent efforts to improve wait times have included adding manpower, shifting manpower as needed to problem areas (e.g., from in-patient to out-patient pharmacies), workflow process improvements, and the addition of or upgrading of current patient queuing systems and pharmacy automation equipment. Facility expansion and improvements are also underway at several Air Force pharmacies.

*Question.* General Green, part of the challenge of recruiting medical professionals is the divide between private sector and military compensation for health special-

ties. Given the increasing fiscal constraints the Department is facing in the coming years, how will you manage your resources to sustain the medical professionals required to care for servicemembers and their families?

Answer. AFMS continually reviews current and projected healthcare needs and directs appropriate changes within the allocated force structure in order to meet our ever-evolving missions. With total personnel inventory slightly below our total funded authorizations, the AFMS meets the Nation's critical mission needs by apportioning the current inventory to meet requirements in the near-term and relying on the purchased care system from our TRICARE partners for the noncritical mission needs of the Air Force. The AFMS is utilizing Federal service employees and contractors within our Medical Treatment Facilities in addition to our TRICARE partners to supplement shortfalls of our uniformed staff as we provide quality healthcare to our entire beneficiary population.

Even as Air Force retention in general is high, recruiting and retention of highly-skilled health professionals is improving with our long-term program strategies, albeit tenuously, through a three-prong approach. The Air Force continues to fund all available authorities to stabilize ailing health professions career fields by:

—fully utilizing scholarship and educational programs for our long-term shortages;
—effectively targeting accession bonuses and other special and incentive pay programs for our immediate needs; and
—providing emphasis and support for other nonmonetary programs to retain our quality staff.

*Question.* General Green, the Services continue to transition patients to a medical home model. This concept organizes health professionals into teams to provide a more comprehensive primary approach. Each patient's personal physician leads the team and serves as a continuous point of contact for care. Has the Air Force seen improvements in patient satisfaction or cost control with this initiative?

Answer. Over the course of the past year, we have completed the enrollment into Patient-Centered Medical Home (PCMH) for our Air Force Family Health and Pediatric clinics. Now more than 945,000 patients are currently being cared for under this model. We have seen a steady improvement in the satisfaction of our patients seen in a PCMH with the percent rating satisfied or completely satisfied with their care rising from 91.9 percent in May 2011 to 93 percent in December 2011. Likewise, we have seen substantial cost avoidance with notable decline in our patients' utilization of Emergency Room/Urgent Care Clinic (ER/UCC) care. Over the similar May–December 2011 time period, ER/UCC utilization from patients enrolled to a PCMH in the Air Force has decreased from 6.87 visits per 100 enrollees per month to 5.59 visits per 100 enrollees per month.

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## QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

### MEFLOQUINE

*Question.* In 2009, the Department of Defense (DOD) published research that showed that approximately 1 in 7 servicemembers with mental health contraindications had been prescribed mefloquine contrary to the instructions in the package insert guidance, including to servicemembers taking antidepressants and with serious mental health conditions such as post-traumatic stress disorder. This research went on to highlight that such use may have significantly increased the risk of serious harm among those who had been misprescribed the drug.

What research has the Air Force undertaken to determine whether this trend has been reversed, and what efforts has the Air Force undertaken to identify and follow-up on those who were misprescribed the drug, to determine whether they may be suffering from the adverse effects of its use? Can the Air Force assure us that this group has not experienced more significant problems associated with this misprescribing?

Answer. The Air Force began enforcing the Food and Drug Administration's warnings and precautions regarding mefloquine in 2005, several years before the Assistant Secretary of Defense for Health Affairs memorandum was issued in 2009. Air Force utilization of mefloquine declined considerably between 2005 and 2009. In 2009, the Health Affairs memorandum about mefloquine was sent to every Air Force medical treatment facility, and subsequently the Air Force mefloquine utilization declined an additional 90 percent from 2009 to 2011. Only 458 prescriptions for mefloquine were issued in 2011.

Mefloquine is one of the medications that have annual drug utilization review requirements from each Air Force medical treatment facility, as directed in the 2005 Air Force memorandum. Reviews cover, at a minimum, the following:

—not prescribing mefloquine to those on flying status or with contraindications;
—correct dosing and directions within prescriptions;
—patient counseling and documentation;
—completing the DD 2766; and
—providing the printed Food and Drug Administration's MedGuide at the pharmacy.

The reviews from the last quarter of 2011 demonstrated that no mefloquine was prescribed to flyers or patients with contraindicating conditions, and that the pharmacy provided the patient medical guide 100 percent of the time.

*Question.* What epidemiological research is currently underway to investigate the short- and long-term effects of exposure to mefloquine? Can you tell me what is the total amount of funding devoted to these projects?

Answer. The Air Force does not currently have any active epidemiologic research on the short- and long-term effects of exposure to mefloquine. However, the Department of Veterans Affairs Medical Follow-up Agency maintains the records and approves research using the clinical and laboratory specimens for one of the longest cohort studies of servicemembers, the Air Force Health Study. The participants in the study may have included members who had received mefloquine for malaria prophylaxis. Additionally, the Army and Navy have ongoing research into antimalarials through the Walter Reed Army Institute of Research, the Naval Medical Research Center, and the overseas laboratories. The Department of Veterans Affairs Medical Follow-up Agency, the Army, and the Navy can provide figures for the total amount of funding devoted to these projects.

*Question.* The Department of Defense has specialized centers to address traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD), including the National Intrepid Center of Excellence and other centers within the Centers of Excellence for Traumatic Brain Injury and Psychological Health. The Centers for Disease Control and Prevention has recently noted that the side effects of mefloquine may "confound the diagnosis and management of posttraumatic stress disorder and traumatic brain injury". Given that the adverse effects of mefloquine may often mimic those of TBI and PTSD, has the Air Force provided training to those who work within the National Intrepid Center of Excellence and Defense Centers of Excellence to include the diagnosis, management, and research of mefloquine toxicity?

Answer. All providers sent by the Air Force to any Center of Excellence are fully qualified and expected to practice in accordance with current clinical standards such as the Department of Veterans Affairs/Department of Defense practice guidelines for TBI and PTSD. The symptoms of TBI are nonspecific, thus any evaluation of symptoms associated with TBI includes consideration of other causative or contributing factors including medications. Likewise, a diagnosis of Acute Stress Disorder or Post Traumatic Stress Disorder requires that the treating provider reach the conclusion that the observed "disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication)" among other factors. Therefore, consideration of the effects of any medications the patient is currently taking, or has taken recently, are integral to the screening and diagnostic processes at the National Intrepid Center of Excellence, Defense Centers of Excellence and Air Force medical treatment facilities worldwide. When Air Force nonphysician mental health providers such as social workers, psychologists, and psychiatric nurse practitioners have questions regarding the potential effects of any medication, they are encouraged to seek consultation and collaboration with psychiatrists or other physicians.

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## QUESTION SUBMITTED BY SENATOR THAD COCHRAN

### HYPERBARIC OXYGEN THERAPY

*Question.* General Green, I understand that $8.6 million is included to fund a clinical trial using hyperbaric oxygen therapy to diagnose and treat brain injury. What is your experience with this therapy? Do you think it has merit in treating traumatic brain injury?

Answer. Anecdotal case reports and open-label studies suggest benefit of hyperbaric oxygen ($HBO_2$) for treating chronic symptoms associated with traumatic brain injury (TBI). However, anecdotes and open-label studies cannot discriminate between the effects of the $HBO_2$ and the indirect, or placebo, effects of study participation. Further, TBI is not endorsed by the Undersea and Hyperbaric Medical Society or approved by the U.S. Food and Drug Administration as a medical indication

for $HBO_2$. The Department of Defense and the Air Force are committed to an evidence-based approach to developing policy on $HBO_2$ use to ensure it is safe, effective, and comparable or superior to standard care for symptoms associated with TBI. Several recent studies, including the Air Force study in San Antonio suggest that $HBO_2$ is safe in servicemembers with chronic symptoms associated with TBI. The Air Force study found no statistical difference between the treatment group and the sham group. Improvements in some test measures, however, were seen in both groups. Additional data analysis is underway to determine if there are similar demographics in subgroups that showed improvement. We continue to support a robust research effort on hyperbaric oxygen for chronic symptoms associated with TBI, and data from those studies will be frequently re-assessed for evidence of safety and efficacy.

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## QUESTIONS SUBMITTED TO VICE ADMIRAL MATTHEW NATHAN

## QUESTIONS SUBMITTED BY CHAIRMAN DANIEL K. INOUYE

### NURSE CORPS CHIEF RANK

*Question.* Admiral Nathan, since 2003 the Nurse Corps Chief position for each of the Services has been authorized as a two-star billet. The Department recently sent over a legislative proposal that would reduce the Corps Chief position to the one-star level. What affect would a reduction in rank have on the Navy Nurse Corps?

Answer. We support the decision to standardize the rank of the Director of the Navy Nurse Corps to the grade of 07, and believe this change will have no adverse impact on the Nurse Corps. Navy Medicine places a priority on our leader development programs, and our Navy Nurses continue to demonstrate they have the experience, skill and motivation to succeed positions of great responsibility and trust. We have Nurse Corps officers in command of our medical treatment facilities, serving in senior operational medicine assignments with the Fleet and Marine Forces, and managing vital headquarters-level responsibilities. The Director of the Navy Nurse Corps will have the skills, experience, and opportunity to succeed as a one-star flag officer; and correspondingly, be highly competitive for selection to two-star. If Director is selected for promotion to two-star, this would allow an another flag officer opportunity for the Nurse Corps as an officer would then be selected to serve as a one-star flag officer and the Director.

### TRICARE FEES

*Question.* Admiral Nathan, the Department's fiscal year 2013 budget assumes $452 million in savings based on new TRICARE enrollment fees and increases in co-pays for prescription drugs. Will these increased fees affect care for servicemembers and their families? How are servicemembers and retirees reacting to these proposals?

Answer. The Department of Navy supports these proposals and believes they are important for ensuring a sustainable and equitable benefit for all our beneficiaries. The TRICARE fee proposals do not affect our Active Duty servicemembers, and specifically exempt medically retired servicemembers and their families, as well as survivors of military members who died on Active Duty. While the proposed increases will primarily impact our retired beneficiaries, military medicine provides one of the most comprehensive health benefits available. These changes will help us better manage costs, provide quality, accessible care, and keep faith with our beneficiaries.

### PHARMACY WAITING TIME

*Question.* Admiral Nathan, the structure of the proposed TRICARE pharmacy co-pays strongly incentivizes members to fill their prescriptions at pharmacies within military treatment facilities. Yet, we continue to hear concerns about the current wait times at numerous pharmacies. How is the Navy addressing the problem of lengthy pharmacy wait times?

Answer. Our Navy Medical Treatment Facilities (MTFs) strive to efficiently balance the staffing of the pharmacy (and other clinical areas) with expected demand, while expanding the service and/or hours of access provided. Understanding that increases in demand are expected in the future and improvements in access could be realized, Navy Medicine has engaged in a relook of the outpatient pharmacy workflow process as part of the acquisition to replace our existing pharmacy automation, which is close to 10 years old.

Through a review of the existing workflow at our larger sites by pharmacy workflow experts (i.e., industrial engineers, operations research specialists, and

pharmacists), we have developed pharmacy workflow and automation requirements. These requirements will support up to a doubling of the existing workload while striving for a 90th percentile wait time of 30 minutes or less. This goal reflects an approximate 50-percent decrease in our current 90th percentile waiting time. Moving forward, we will continue to invest in pharmacy automation which allows us to address any expected increase in demand at our MTF pharmacies and maintain outstanding customer services.

SUICIDE PREVENTION

*Question.* Admiral Nathan, the Services are seeking to provide early identification and treatment of psychological health through a number of initiatives; yet, suicides throughout the military continue to rise. In 2011, Active Duty, Guard, and Reserve soldiers took their lives at a record high rate. How are the Services working together to learn from one another and combat the continued rise in suicides?

Answer. The Services work together closely in the area of suicide prevention by sharing lessons learned, research, and promising practices in formal and informal mechanisms of suicide prevention. The Navy continues to integrate efforts related to personal and family readiness programs, not only across the Navy enterprise but in collaboration with the other Services, DOD, the VA, and various Federal agencies, with the shared goal of reducing the number of suicides. Some specific ways the Services have worked together include:

*Suicide Prevention and Risk Reduction Committee*

The DOD Suicide Prevention and Risk Reduction Committee (SPARRC) with representation from all Services (including Coast Guard) and DOD, has now expanded to include VA and Substance Abuse and Mental Health Services Administration (SAMSHA) participants. Over the years the SPARRC has worked to standardize the process for determining suicide numbers and rates, developed a common data collection mechanism (the DOD Suicide Event Report), conducted an annual conference, and provided a forum for the sharing of observations, promising practices, and lessons learned regarding the prevention of military suicides. The SPARRC chairmanship moved from its original home in DOD Health Affairs to the Defense Center of Excellence, and at the end of 2011, to the new OSD Suicide Prevention Office under the Undersecretary of Defense for Readiness.

*Department of Defense/Department of Veterans Affairs Suicide Prevention Conference*

The Department of Defense (DOD)/Department of Veterans Affairs (VA) Annual Conference has grown into the largest meeting of its kind in the world. This weeklong conference has multiple tracks that include clinical, research, and practical tools for suicide prevention. It brings together many of the Nation's leading suicidology theorists and researchers, along with military leaders, care providers, and policymakers.

*Task Force*

The congressionally mandated (Fiscal Year 2009 National Defense Authorization Act) Task Force on the Prevention of Suicides Among Members of the Armed Forces published its report in the fall of 2010. The Services are continuing to implement many of these recommendations and one key outcome has been the establishment of an office within OSD.

PHYSICIAN STAFFING

*Question.* Admiral Nathan, some medical specialties are severely understaffed, particularly in the Reserve component. How is the Navy ensuring that it has the number of Reserve physicians it needs?

Answer. Reserve physician recruiting remains one of our greatest challenges; our manning at the end of March 2012 was at 55 percent of requirements. High Active component physician retention rates are a positive for the Navy; however, the second order affect is a decreased pool of medical professionals eligible for Reserve affiliation. Consequently, there is a greater reliance on attracting civilian physicians in a highly competitive Direct Commission Officer (DCO) market.

We have developed strong partnerships with our key Navy stakeholders and are exploring a plethora of action items in our efforts to recruit and retain the right physician skill sets in our Reserve physician inventory. Examples include a Medical Leads Assistance Program; affiliation, specialty, and incentive pay initiatives; and a change in paygrade billet requirements under an Officer Sustainability Initiative. We are optimistic that these initiatives as well as a continued reduction in Reserve

Individual Augmentee assignments will incentivize potential Reserve physician recruits.

Navy Medicine has representation on the Tri-Service Medical Working Group that has reviewed the results of the Joint Advertising, Market Research and Studies (JAMRS) Physician Recruit Study (Recruiter Guide) released in September 2011 and work continues to augment incentive capabilities to address the challenges all Services are experiencing in recruiting Reserve physicians.

MILITARY HEALTH SYSTEM STRUCTURE

*Question.* Admiral Nathan, earlier this month the Department released its final decision on the structure of the Military Health System. The Department decided on a proposal to combine the administration and management of the Military Health System into a Defense Health Agency. Can you please share with the subcommittee any concerns you may have about the final recommendations?

Answer. Navy Medicine fully supports a joint solution that will enhance interoperability of medical care across the MHS both operationally and within Services' medical treatment facilities. We must, first and foremost, not break a highly functioning patient care continuum that can bring a warrior from the point-of-injury to definitive care at a level four MTF in 48–72 hours. A thorough outcomes-based analysis of any major changes in governance that impacts meeting Service operational commitments must first be completed and then presented to the Service Chiefs. Although the belief may be that consolidation of services or support will be cost effective, an in-depth effects-based analysis for each shared service prior to consolidation must be completed to set a baseline cost to assess the need for change or to evaluate future return on investment of system changes. The bottom line is that the MHS must proceed in a deliberate and measured manner to ensure that our readiness to support our Services' missions and core warfighting capabilities will be maintained and our excellence in healthcare delivery will be sustained.

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QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

MEFLOQUINE

*Question.* In 2009, the Department of Defense (DOD) published research that showed that approximately 1 in 7 servicemembers with mental health contraindications had been prescribed mefloquine contrary to the instructions in the package insert guidance, including to servicemembers taking anti-depressants and with serious mental health conditions such as post-traumatic stress disorder (PTSD). This research went on to highlight that such use may have significantly increased the risk of serious harm among those who had been misprescribed the drug.

What published research has the Navy undertaken to determine whether this trend has been reversed, and what efforts has the Navy undertaken to identify and follow-up on those who were misprescribed the drug, to determine whether they may be suffering from the adverse effects of its use? Can the Navy assure us that this group has not experienced more significant problems associated with this misprescribing?

Answer. In 2006, medical researchers at the Naval Health Research Center in San Diego published a peer-reviewed paper describing a retrospective study of health histories of 8,858 Active Duty servicemembers who had been prescribed mefloquine between 2002 and 2004. The health history outcomes of these members were compared against a full analysis of the health histories of 388,584 servicemembers not prescribed mefloquine during the same period. The results of that study showed a significantly decreased proportion of mefloquine prescribed individuals hospitalized for mood disorders when compared to servicemembers assigned to Europe or Japan and no difference in mood disorders or mental disorders compared to servicemembers in deployed status. These data demonstrated no association between mefloquine prescriptions and severe health effects as measured by hospitalizations across a wide range of disorders, including mental health outcomes.

Navy Medicine is aware of two articles published in 2008 and 2009 describing analysis of military medical records of a cohort of 11,725 servicemembers progressively deployed to Afghanistan over a 6-month period in early 2007 of which 38.4 percent had been prescribed prophylactic use of mefloquine. Of those so prescribed, 13.8 percent had recorded medical history which would pose a relative contraindication to its use.

Navy Medicine has not performed a follow-up on the data or subjects described in the 2008 and 2009 articles as this analysis did not provide information as to adverse outcome, nor did it break out information from the analysis of records that

included servicemembers from all services which would have identified what proportion of the cohort records analyzed pertained to Navy or Marine Corps personnel. Navy Medicine stands by the medical outcome data described in the Naval Health Research Center study of 2006.

*Question.* What epidemiological research is currently underway to investigate the short- and long-term effects of exposure to mefloquine? Can you tell me what is the total amount of funding devoted to these projects?

Answer. At this time, there is no epidemiological research currently underway which would add to or test the findings of the 2006 published study of prescription of mefloquine to 8,858 Active Duty servicemembers which demonstrated a decreased proportion of mefloquine prescribed individuals hospitalized for mood disorders when compared to servicemembers assigned to Europe or Japan and no difference in hospitalizations across a wide range of disorders, including mental health outcomes in combined data from individuals assigned to Europe, Japan, or otherwise deployed.

*Question.* DOD has specialized centers to address traumatic brain injury (TBI) and PTSD, including the National Intrepid Center of Excellence and other centers within the Centers of Excellence for Traumatic Brain Injury and Psychological Health. The Centers for Disease Control and Prevention has recently noted that the side effects of mefloquine may "cofound the diagnosis and management of posttraumatic stress disorder and traumatic brain injury". Given that the adverse effects of mefloquine may often mimic those of TBI and PTSD, has the Navy provided training to those who work within the National Intrepid Center of Excellence and Defense Centers of Excellence to include the diagnosis, management, and research of mefloquine toxicity?

Answer. Navy Medicine has not specifically provided training on the diagnosis, management, and research of mefloquine toxicity to the professional staff at the Defense Centers of Excellence (DCoE). However, the DCoE staff has reviewed reports, guidance, and DOD policy related to the use of mefloquine. Additionally, their staff has actively completed reviews of the current science on the use of mefloquine for malaria chemoprophylaxis and neuropsychiatric adverse reactions, as well as reviews of mefloquine, TBI, and psychological health conditions. As reported to Navy Medicine, DCoE staff continues to monitor emerging science as it relates to mefloquine, TBI, and psychiatric conditions and will work to revise clinical guidance and provide input to DOD policy should emerging science indicate clear detrimental effects.

With respect to mefloquine confounding the diagnosis of mild TBI and/or PTSD, staff members from the National Intrepid Center of Excellence (NICoE) have also not undergone specific training. However, personnel who comprise the White Team—the triage team which screen all prospective NICoE candidates—include two experienced medical officers with extensive combat/deployment experience who understand the potential neuropsychiatric contraindications and have utilized mefloquine appropriately in the deployed environment. The White Team is also backed up by a neurologist and neuropsychologist who, similarly, have comprehensive knowledge of compounds, drugs, and exposures which may impact the nervous system. Additionally, all members presented to NICoE go through an exhaustive medication review, supported by a Doctor of Pharmacy (Pharm D).

Finally, Navy Medicine is currently developing a mefloquine training module to serve as a refresher on FDA requirements and DOD policy for all providers and pharmacists. This training is expected to be implemented by June 2012.

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## QUESTIONS SUBMITTED BY SENATOR BARBARA A. MIKULSKI

### NONMEDICAL CAREGIVERS

*Question.* Military family members already make incredible sacrifices to support both the soldier deployed and the wounded warrior at home. Since 2001, nearly 2 million troops have deployed in support of Operation Enduring Freedom and/or Operation Iraqi Freedom; of those, nearly 800,000 have deployed more than once. There are nearly 48,000 wounded warriors from the 10 years of war. For many wounded warriors, their spouses and extended families become the front line of care for their rehabilitation and recovery. These nonmedical caregivers have to choose between their critically injured relative and their careers, children, and financial well-being.

What has the Navy done to enhance care for family members of wounded marines and sailors?

Answer. The Navy's Project FOCUS (Families Over Coming Under Stress) is a family psychological health and resiliency building program that addresses family functioning in the context of the impact of combat deployments, multiple deployments, and high-operational tempo. The application of a three-tiered approach to care via community education, psychoeducation for families, and brief-treatment intervention for families, has shown statistically significant outcomes in increasing family functioning and decreasing negative outcomes such as anxiety and depression in both parents and children. The program takes a de-stigmatized approach to care and is integrated within the community context.

Additionally, the Marine Corps realizes that family members are essential to the successful recovery of our wounded, ill, and injured (WII) marines. Accordingly, we work to ensure our WII marines' families are part of the recovery process, to include supplying them with support programs and services. Since the Wounded Warrior Regiment (WWR) stood up more than 5 years ago, we have continually enhanced our services to ensure that the unique needs of our families are addressed. Examples include:

—Family readiness and support staff at all locations;
—Recovery Care Coordinators to help WII Marines and their family members map out and attain their recovery goals;
—The Wounded Warrior Call Center, a 24/7 outreach and reach-back resource and referral capability;
—District Injured Support Coordinators (DISCs) who help transitioning marines and families in remote locations away from military or Federal resources;
—Our Medical Cell, a cell that provides medical subject matter expertise, advocacy, and liaison to the medical community; and
—Enhanced communication efforts to ensure family members receive the right information when they need it through easy-to-understand fact sheets, a Marine Corps-customized "Keeping It All Together" Handbook, and a new mobile WWR App.

*Question.* What training does the nonmedical caregiver receive to ensure continuity of care for their wounded warrior once that marine or sailor makes a transition to home?

Answer. The WWR is working with the Office of Wounded Warrior Care and Transition Policy to ensure all caregivers of Marines who are receiving Special Compensation for Assistance with Activities of Daily Living receive caregiver training materials developed by the Easter Seals Foundation (also used by the Department of Veterans Affairs for their Caregiver Stipend Program). WWR also provides "Care for the Caregiver" Workshops as well as FOCUS, the resiliency training program referred to above. FOCUS is designed to assist and promote strong Marine Corps families to better equip them to contend with the stress associated with multiple deployments, combat stress, and physical injuries. Additionally, the WWR's DISC Program collaborates with Navy-Marine Corps Relief Society visiting nurses to make home visits to our WII marines and families in need. These nurses can provide a myriad of services, to include evaluate of home safety and adaptability, emotional support to families, and advocacy for the patient and family as they adjust to the enormous life changes resulting from their injuries.

*Question.* What support do they receive to ensure they can maintain their own psychological health and well-being through this process?

Answer. The WWR's capabilities mentioned above provide reach-back resource and referral capabilities for family members to maintain their psychological health and well-being. More specifically, the WWR Medical Cell is skilled at providing family referrals to the appropriate psychological health service, depending upon their needs and requirements.

*Question.* What has the Navy done to leverage the help the private sector can provide?

Answer. Many individuals and organizations routinely offer gifts to the Department of Defense, units, military personnel, and their families. The WWR's Charitable Giving Office works within the confines of Federal law and policy to ensure WII marines and families benefit from private sector help when and where it is appropriate. Support includes, but is not limited to, respite opportunities, child care, travel assistance, lodging/housing, and social activities.

MEDICAL PAIN MANAGEMENT

*Question.* Reliance on prescription cocktails to handle mental and pain management is having serious negative consequences amongst our military servicemembers. Recent studies have found that veterans with PTSD were most likely to be prescribed opioids as compared with vets with no mental health disorder—33.5 percent

compared with 6.5 percent. Accidental drug deaths have doubled from 2001–2009, while prescriptions for painkillers are up 438 percent since 2001. The "Defense Survey of Health-Related Behaviors" found "dangerous levels" of alcohol abuse and the illicit use of drugs such as pain killers by 12 percent of military personnel.

Should the military medical community examine its reliance on narcotics to control pain among wounded warriors?

Answer. The Services are aware and concerned about alarming national trends in increased use of opioids and secondary complications, including misuse, dependence, higher care cost, and adverse outcome (including death). The Fiscal Year 2010 National Defense Authorization Act (section 711) directed the Secretary of Defense to develop and implement a comprehensive policy on pain management. In August 2009, the Army Surgeon General chartered the Army Pain Management Task Force to make recommendations for a comprehensive pain management strategy that was holistic, multidisciplinary, and multimodal in its approach. Task Force membership included representatives from the Navy, Air Force, TRICARE Management Activity, and the Veterans Administration. The Task Force developed 109 recommendations. The Office of the Secretary of Defense (Health Affairs) released a Policy for Comprehensive Pain Management in March 2011.

Navy Medicine has designed the Navy Comprehensive Pain Management Program (NCPMP) to improve and expand pain management resources for all servicemembers. Key specific NCPMP objectives are to meet NDAA requirements and Joint Commission (JC) standards, by providing standardized and optimized care in accordance with recently published clinical practice guidelines. The current state-of-the-art for management of chronic and complex pain is based on the biopsychosocial model, which promotes a paradigm of comprehensive, multidisciplinary, and multimodal care. In that capacity, an important focus of the NCPMP is the expansion of access to health psychologists, physical therapists, exercise physiologists, and integrative medicine physicians to ensure the effective fusion of mainstream treatments like cognitive behavior therapy with Complementary and Alternative Medicine (CAM) approaches, including the use of acupuncture. The specific stated mission of the NCPMP is "To aid in the restoration of function and relief of pain by broadening access to state-of-the-art, standardized, multimodal, and interdisciplinary pain care across Navy Medicine, ensuring treatment efficacy through practice guidelines, education, and analysis of treatment outcomes."

To diminish reliance on narcotics to control pain, Navy Medicine is focusing on three general paradigms. First, decrease development of pain via prevention of injury (e.g., ergonomics, occupational safety) and disease precursors. Second, educate members and healthcare providers about risks of opioids and best practices when they are prescribed. Two videos are to be released shortly for required training of all Navy and USMC personnel (The War Back at Home) and providers (Do No Harm). Interim guidance and a subsequent Pain Instruction are to be released by BUMED as well, educating providers about up-to-date best practices for opioid use (e.g., routine screening for appropriateness, sole provider agreements, informed consent, and a multimodal approach). Third, provide capability for healthcare providers to utilize a multimodal biopsychosocial approach by employing alternative capabilities and assets. To that end, the NCPMP will utilize provider assets in pain medicine, integrative medicine, CAM, mental health and addiction medicine, case management, exercise physiology, physical therapy, and athletic training. These pain care assets, functionally integrated into Medical Home and SMART Clinics, will enable and promote comprehensive management of complex acute and chronic pain throughout Navy Medicine. A key component of NCPMP's Concept of Operations is tiered rollout of system wide acupuncture capability based on systematic and consistent training, certification, and credentialing throughout the healthcare enterprise.

*Question.* What alternative options of pain management does the Navy have in place to give doctors a choice to lessen the use of prescription pain killers?

Answer. Please see answer above. The following is a listing of key pain management modalities available to Navy doctors:

—Disease-specific measures:
  —Tighter glucose control in diabetes;
  —Disease-modifying agents in MS and other inflammatory disorders;
  —Surgery, chemotherapy, radiation therapy for nerve compression;
  —Infection control (HIV, herpes zoster, lyme disease); and
  —Ergonomics and occupational safety.
—Local and regional treatments:
  —*Regional Anesthetics (Pain Specialists):* sympathetic, epidural, intrathecal, and selective nerve root blocks; epidural and intrathecal pumps;

—*Stimulation-Based:* TENS, spinal cord stimulation, acupuncture (licensed, medical);
—*Complementary and Alternative Medicine (CAM):* acupuncture, Osteopathic Manipulation, therapeutic massage;
—*Physical Rehabilitation:* PT/OT, splinting, manipulation, assistive devices, range-of-motion exercises, ergonomics; and
—*Ablative Procedures:* phenol/alcohol nerve ablation, cordotomy/rhizotomy, radiofrequency nerve root ablation.

—Systemic treatments:
—*Pharmacological:* Tricyclic antidepressants, SNRIs, clonazepam, atypical antipsychotic medications, gapapentin, pregabalin, anticonvulsants, NSAIDs, corticosteroids, opioids, mu-opioids (e.g., tramadol), muscle relaxants/antispasmodics, and benzodiazepine receptor antagonists (e.g., zolpidem); and
—*Behavioral:* Addiction Medicine counseling, Psychologic counseling (cognitive behavioral therapy, biofeedback, guided imagery, other relaxation techniques).

*Question.* Does the Navy track rates of addiction to prescription pain killers among wounded warriors—how would you know if you had a problem?

Answer. The EpiData Center at the Navy and Marine Corps Public Health Center (NMCPHC) in Portsmouth, Virginia, currently provides a monthly prescription burden report for Marine specialty groups, and provides this report for the Navy and Marine Corps on a semiannual basis. The report includes an assessment of chronic prescription pain medication use. The report does not define addiction to prescription pain medications, but rather is used by local units to determine at their level if further action is needed.

The Navy Health Research Center (NHRC) in San Diego, California, is also able to look at trends in diagnoses for opioid addiction and may be able to cross-reference this with prescription reissuance patterns as that capability continues to build through NHRC's new pharmaceutical use project.

*Question.* Peer-reviewed studies demonstrate that servicemembers who incorporate complementary medicine for pain management rely less on prescriptions for pain management. Do you see promise for a more widespread application of this program?

Answer. As noted, Navy Medicine is committed to expansion of Complementary and Alternative Medicine (CAM) to enable and promote a comprehensive biopsychosocial approach to management of pain by Navy healthcare providers. Please see above answers for details.

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## QUESTION SUBMITTED BY SENATOR THAD COCHRAN

### HYPERBARIC OXYGEN THERAPY

*Question.* Admiral Nathan, I understand that $8.6 million is included to fund a clinical trial using hyperbaric oxygen therapy to diagnose and treat brain injury. What is your experience with this therapy? Do you think it has merit in treating traumatic brain injury?

Answer. The study for which this referenced funding will provide support is being administered and managed by the U.S. Army Medical Research and Material Command. Naval facilities at Camp Pendleton and at Camp Lejeune are participating in this study as centers where enrolled volunteers will be evaluated. To date, there is no outcome data available from this study.

Naval facilities at Camp Lejeune, as well as at Pensacola and Panama City, Florida, are also participating in a DARPA-funded dose ranging study, conducted by the Naval Operational Medical Institute (NOMI), the McGuire VA Medical Center in Richmond, and the Virginia Commonwealth University. The study has recruited 60 percent of its volunteers, essentially all from Marine Corps Base Camp Lejeune. The target completion date is October 2012.

As of March 28, 2012, there are no data to report from either of these two studies. There is, therefore, still no outcome information from well-designed, adequately controlled medical research which would support the safety and efficacy of use of hyperbaric oxygen for traumatic brain injury.

QUESTIONS SUBMITTED TO LIEUTENANT GENERAL PATRICIA HOROHO

QUESTIONS SUBMITTED BY CHAIRMAN DANIEL K. INOUYE

CORPS CHIEF POSITION LEGISLATIVE PROPOSAL

*Question.* Since 2003, the Nurse Corps Chief position for each of the Services has been authorized as a two-star billet. The Department recently sent over a legislative proposal that would reduce the Corps Chief position to the one-star level. General Horoho, how has the increase in rank benefited the Army Nurse Corps?

Answer. The rank of Major General afforded the Corps Chief the greater impact to sponsor great strides in the advancement of our mission in serving America's sons and daughters. A change in the Corps Chief's rank will not change the mission nor the importance of Army Nursing and our commitment of excellence in nursing care to our servicemembers and families will remain steadfast. There are many opportunities within the U.S. Army Medical Department (AMEDD) for nurses to cultivate leadership experience. The Army has a strong developmental path for its leaders, regardless of area of concentration.

TRICARE

*Question.* The Department's fiscal year 2013 budget assumes $452 million in savings based on new TRICARE enrollment fees and increases in co-pays for prescription drugs. General Horoho, did the Department consider more modest fee increases for enrollment and prescription drugs than the significant fees proposed in the budget? Realizing the current difficult fiscal environment, is it fair to levy these prescription drug fees on our uniformed men and women who have been at war for more than 10 years?

Answer. I must defer to the Department of Defense (DOD) to comment on any alternative strategies they may have used to develop this proposal.

The proposal to raise pharmacy retail and mail order co-pays does not affect the Active Duty servicemember. The co-pays apply only to retirees and family members in order to encourage the use of mail order and generic drugs. Understanding the concern for the rising cost of medications to beneficiaries and realizing that a continual rise in medication costs to DOD jeopardizes the benefit for all, Army Medicine is developing a plan to promote beneficiaries' return to the military treatment facility for prescription fills for no or low medication costs. Increasing formularies, improving access to pharmacies, and providing pharmacists for medication counseling are a few steps towards accomplishing this goal.

*Question.* General Horoho, the structure of the proposed TRICARE pharmacy co-pays strongly incentivizes members to fill their prescriptions at pharmacies within military treatment facilities. Yet we continue to hear concerns about the current wait times at numerous pharmacies. What steps are being taken to alleviate wait times, and will current facilities be able to process an increase in prescriptions?

Answer. Initiatives currently underway that ease military treatment facility wait times include workflow process changes, permitting patients to drop off prescriptions and return at later times, and physician-faxed prescriptions. These are a few ways that allow the pharmacies to increase workload without affecting wait times. Plans are in place to expand pharmacy staffing as workload increases. Expansion of Community Based Medical Homes (CBMH) will shift workload from the main pharmacies providing the opportunity to recapture prescriptions at the current facilities. The pharmacies in CBMH can also provide support to beneficiaries in their community, offering another avenue for filling prescriptions.

SUICIDE RATE

*Question.* General Horoho, the Services are seeking to provide early identification and treatment of psychological health through a number of initiatives; yet suicides throughout the military, and especially in the Army, continue to rise. In 2011, Active Duty, Guard, and Reserve soldiers took their lives at a record high rate. What more can we be doing for our servicemembers to ensure they are receiving the necessary behavioral and mental healthcare in order to reverse this disturbing trend?

Answer. The Army's Behavioral Health System of Care continues to explore ways to improve behavioral health services. The BHSOC currently has an extensive array of behavioral health services and wellness resources available to address the strain on servicemembers and their families throughout the Army Force Generation Cycle. Soldiers and family members have additional counseling options and other avenues to deal with stress through Army Chaplain services, Military One Source, in-theater combat and operational stress programs, psychological school programs, Army Community Service programs, and the Comprehensive Soldier Fitness program. Included

in the BHSOC is the roll out of new and innovative evidenced based programs such as Embedded Behavioral Health in Brigade Combat Teams, Patient Centered Medical Homes and School Behavioral Health that will significantly change how we provide support to our soldiers and families.

RECRUITMENT AND RETENTION OF MEDICAL PROFESSIONALS

*Question.* General Horoho, part of the challenge of recruiting medical professionals is the divide between private sector and military compensation for health specialties. Given the increasing fiscal constraints the Department is facing in the coming years, how will you manage your resources to sustain the medical professionals required to care for servicemembers and their families? Beyond the compensation gap, what other challenges do you face in recruiting and retaining a sufficient number of both military and civilian healthcare personnel?

Answer. Entry into the future fiscally constrained environment will present challenges to any increase in the scope or dollar amounts of special pays. However, by targeting accession and retention bonuses, in coordination with sister services, the Army anticipates success in the recruitment of health professionals. DOD has recently delegated the authority to use an expedited hiring authority for 38 medical occupations. We are working to implement this new appointment authority.

Nationwide shortages of highly trained health professionals remain a top challenge to the U.S. Army Recruiting Command (USAREC) in the recruitment of physicians, dentists and behavioral health professionals. Our student programs continue to be the lifeblood of our accession pipeline and accessions into these programs are doing well. We continue to partner with USAREC to insure all avenues are addressed with regard to recruitment of the necessary personnel to sustain the force.

MILITARY HEALTH SYSTEM

*Question.* General Horoho, earlier this month the Department released its final decision on the structure of the Military Health System. The Department decided on a proposal to combine the administration and management of the Military Health System into a Defense Health Agency. What advantages and challenges do you see to the jointness among the Services proposed in the new governance strategy?

Answer. This recommendation represents an opportunity to achieve cost savings through reduction of duplication and variation, while accelerating the implementation of shared services, identify and proliferate common clinical and business practices, and develop entirely new approaches to delivering shared activities. I am encouraged by the potential benefits achieved by this plan and support the DOD's plan to move iteratively towards increased jointness.

MEDICAL HOME

*Question.* General Horoho, the Services continue to transition patients to a medical home model. This concept organizes health professionals into teams to provide a more comprehensive primary approach. Each patient's personal physician leads the team and serves as a continuous point of contact for care. The Army's new community-based medical homes are located off-post in communities in order to provide increased capacity for primary care. What are the Army's plans to expand this program, and when will it be available service-wide?

Answer. The Army currently has 17 medical home practices in operation in our military treatment facilities (MTF) and 13 community-based medical homes open in the communities where our Army families live. By the end of this calendar year, 49 additional MTF-based medical home practices and 5 more community-based medical homes will open. The Army will ultimately transform 100 percent of its primary care to the medical home model by the end of calendar year 2014. We are also implementing this capability in our TO&E facilities.

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QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

MEFLOQUINE

*Question.* In 2009, the Department of Defense (DOD) published research that showed that approximately 1 in 7 servicemembers with mental health contraindications had been prescribed mefloquine contrary to the instructions in the package insert guidance, including to servicemembers taking anti-depressants and with serious mental health conditions such as post-traumatic stress disorder. This research went

on to highlight that such use may have significantly increased the risk of serious harm among those who had been misprescribed the drug.

What research has the Army undertaken to determine whether this trend has been reversed, and what efforts has the Army undertaken to identify and follow-up on those who were misprescribed the drug, to determine whether they may be suffering from the adverse effects of its use? Can the Army assure us that this group has not experienced more significant problems associated with this misprescribing?

Answer. The U.S. Army Pharmacovigilance Center (USAPC) conducts continual review of data for:

—the potential mis-prescribing of mefloquine with psychiatric medications;

—the potential mis-prescribing in those servicemembers with a diagnosis of psychiatric illness; and

—the acceptable use of mefloquine in those patients with a recent (within 1 year) history of psychiatric medication use.

The USAPC will evaluate the risk of mefloquine use and subsequent psychiatric medication prescription or a psychiatric diagnosis.

*Question.* What epidemiological research is currently underway to investigate the short- and long-term effects of exposure to mefloquine? Can you tell me what is the total amount of funding devoted to these projects?

Answer. There is no funded epidemiology research at this time by the U.S. Army Medical Research Material Command to investigate the short- and long-term effects of exposure to mefloquine. The Army Medical Department has not provided training on mefloquine to Defense Center of Excellence or National Intrepid Center of Excellence.

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## QUESTIONS SUBMITTED BY SENATOR BARBARA A. MIKULSKI

### SUPPORT FOR NONMEDICAL CAREGIVER

*Question.* Military family members already make incredible sacrifices to support both the solider deployed and the wounded warrior at home. Since 2001, nearly 2 million troops have deployed in support of Operation Enduring Freedom and/or Operation Iraqi Freedom; of those, nearly 800,000 have deployed more than once. There are nearly 48,000 wounded warriors from the 10 years of war. For many wounded warriors, their spouses and extended families become the front line of care for their rehabilitation and recovery. These nonmedical caregivers have to choose between their critically injured relative and their careers, children, and financial well-being.

What has the Army done to enhance care for family members of wounded soldiers?

Answer. Caregivers are authorized medical care in a military treatment facility (MTF) while in nonmedical attendant (NMA) status. The Army recognizes the difficulties our wounded warrior primary caregivers face on a daily basis. If NMA is a dependent of the wounded warrior, they are entitled to the full range of behavioral health services the Army has to offer to support their needs. Additionally, the spouse, son, daughter, parent, or next of kin of the covered servicemember are entitled to take up to 26 workweeks of leave during a "single 12-month period" to care for a seriously injured or ill covered servicemember under new military family leave provisions.

Additionally, on August 31, 2011, the Department of Defense authorized the Special Compensation for Assistance with Activities of Daily Living (SCAADL). The Army issued its SCAADL implementing guidance on November 21, 2011. The program is applicable to all soldiers—Active, National Guard, and Army Reserve. The SCAADL stipend provides a monthly payment to the soldier to support the caregiver. The basis for the level of payment is the severity of the soldier's wound, injury, or ailment, the amount of caregiver support required, and the geographic location of the soldier. Since implementing the SCAADL stipend, the Army has made payments to 347 families. As of May 4, 2012, 310 soldiers are currently receiving the SCAADL stipend, with an average payment of $1,473 per month.

*Question.* What training does the nonmedical caregiver receive to ensure continuity of care for their wounded warrior once that soldier makes a transition to home?

Answer. In early April 2012, the Office of the Secretary of Defense Wounded Warrior Care and Transition Policy drafted a memorandum of understanding between the Under Secretary of Defense for Personnel and Readiness and the Under Secretary of Veterans Affairs, Veterans Health Administration (VHA) for the purpose

of having VHA, through their contract provider (Easter Seals), provide training for the caregivers assisting eligible catastrophic servicemembers in the SCAADL program.

Also in early April 2012, the Easter Seals mailed training workbooks and CDs to each Army Warrior Transition Unit for distribution to the caregivers of soldiers in the process of transition from the Army to the VA. Before the VA will certify a caregiver, the caregiver must pass a test and the VA will conduct an in-home visit of the location where the soldier and caregiver will reside.

The training workbooks have six modules:

—caregiver self-care;
—home safety;
—caregiver skills;
—veteran/servicemember personal care;
—managing changing behaviors; and
—resources.

*Question.* What support do they receive to ensure they can maintain their own psychological health and well-being through this process?

Answer. The Army recognizes the difficulty of wounded warrior primary caregivers. If a nonmedical attendant is a dependent of the wounded warrior, they are entitled to the full range of behavioral health services the Army has to offer to support their needs. Additionally, the spouse, son, daughter, parent, or next of kin of the covered servicemember are entitled to take up to 26 workweeks of leave during a "single 12-month period" to care for a seriously injured or ill covered Servicemember under new military family leave provisions.

Many family members who serve as nonmedical caregivers are eligible for care in the military health system. These family members have access to direct and purchased care providers to address their personal psychological health and well-being. Members of the soldier's extended family who would not normally be eligible for care in the direct care system and who do not have private healthcare coverage may apply for access to care through the Secretary of Defense.

Licensed Clinical Social Workers and Nurse Case Managers are required to assess potential family issues with each wounded warrior encounter as part of their standard of practice. Both Licensed Clinical Social Workers and Nurse Case Managers encourage family/caregiver participation in the rehabilitation and recovery process which enhances the ability to assess the needs of the nonmedical caregiver.

Every Warrior Transition Unit has a Family Readiness Support Assistant. This individual is charged with reaching out to nonmedical caregivers to assess their needs and provide resiliency and support activities for spouses and extended families.

We acknowledge that additional emphasis must be placed on the care of the caregiver. In November 2011, Army Family Action Plan Conference participants raised caregiver support as a formal issue for the Army to address. The Army Family Action Plan recommendation was to implement formal standardized, face-to-face training for designated caregivers of wounded warriors on self-care, stress reduction, burnout, and prevention of abuse/neglect. In June 2012, all Army Nurse Case Managers will begin receiving training in Caregiver Support. Nurse Case Managers will be educated on how to assess and train caregivers using the same training required by VA prior to receiving caregiver compensation in order to enhance lifelong learning and further reduce the training burden on caregivers. Following the training, Nurse Case Managers caring for wounded warriors will be required to invite caregivers in for an individual assessment, education using the Easter Seals training workbook, and potential referral to the Licensed Clinical Social Worker and/or other appropriate resources.

*Question.* What has the Army done to leverage the help the private sector can provide?

Answer. The Army recognizes the difficulty of wounded warrior primary caregivers. Dependents of wounded warriors are entitled to the full range of services the Army has to offer to support their needs. These services include those services available to Army beneficiaries in the private sector. Additionally, the spouse, son, daughter, parent, or next of kin of the covered servicemember are entitled to take up to 26 workweeks of leave during a "single 12-month period" to care for a seriously injured or ill covered servicemember under new military family leave provisions.

MENTAL HEALTH CARE PROVIDER GAP

*Question.* Former Vice Chief of Army, General Chiarelli has recently talked about a shortage in behavioral/mental healthcare providers. A 2011 report by American

Psychological Association found a 22-percent decrease in uniformed clinical psychologists and further characterized the approach to helping soldiers and families as a "patchwork." There are not enough behavioral health specialists and those who are serving are completely overwhelmed by the level of work they have. Furthermore, the Guard and Reserve forces have been hit particularly hard by mental health issues. A 2011 study found nearly 20 percent of returning reservists had mental health problems serious enough for follow-up. Guard and Reservists are 55 percent more likely than Active Duty members to have mental health problems. Compounding the problem, Reservists lack access to the system or networks that experts say are needed to assess and treat their injuries.

Do you have the workforce you need; whether it's mental healthcare providers or integrative medicine practitioners—such as acupuncturists?

Answer. Behavioral health remains one of the Army's hardest to fill specialties. Specific shortage areas include psychiatrists, social workers, and technicians. Emerging capability needs related to integrative medicine, the Integrated Disability Evaluation System, Patient Centered Medical Homes, and brigade combat team embedded behavioral health will require additional providers.

*Question.* Does the military health budget address the behavioral health providers?

Answer. Yes, the Defense Health Program provides funding for Behavioral Health (BH) providers. The Army Medical Command has an historic base budget of more than $125 million for civilian BH providers. The fiscal year 2013 President's budget sustains an additional $184 million in funding for psychological health requirements that includes BH providers (among other BH operating costs, including facilities). Further, there is an additional $20.8 million for BH providers as part of our Patient Centered Medical Home initiative; $24 million for our Embedded Behavioral Health initiative; and another $21 million for BH providers supporting the Integrated Disability Evaluation System.

*Question.* What are you doing to attract and retain more mental healthcare providers?

Answer. There are numerous programs to attract mental health providers to the Active military force. The Critical Wartime Skills Accession Bonus allows us to offer a psychiatrist an accession bonus of $272,000 for a 4-year commitment. There are accession and retention bonus programs for Clinical Psychiatrists and the Accession Bonus Program for Social Work officers. We have expanded our training programs to attract more recent graduates into service to accomplish the years of supervision required to become independent practitioners. Certified Psychiatric Nurse Practitioners are eligible for Incentive Special Pays.

The MEDCOM has been successful in civilian recruiting and retention efforts by focusing on recruiting and retention incentives, an aggressive outreach recruitment program, and the addition of civilian students in the Fayetteville State Masters of Social Work Program. The MEDCOM has centralized the recruitment process for mission critical specialties, and that effort has reduced the fill time for hiring.

## ADDICTION TO PRESCRIPTIONS

*Question.* Reliance on prescription cocktails to handle mental and pain management is having serious negative consequences amongst our military servicemembers. Recent studies have found that veterans with PTSD were most likely to be prescribed opioids as compared with vets with no mental health disorder—33.5 percent compared with 6.5 percent. Accidental drug deaths have doubled from 2001–2009, while prescriptions for painkillers are up 438 percent since 2001. Furthermore, nearly 30 percent of Army suicides between 2005 and 2010 included drug and/or alcohol use.

Should the military medical community examine its reliance on narcotics to control pain among wounded warriors?

Answer. The 2010 Army Pain Management Task Force examined not only military medicine's but U.S. medicine's overreliance on medication-only treatment for pain. The Pain Management Task Force Report made more than 100 recommendations to provide a comprehensive pain management strategy that was holistic, multidisciplinary, and multimodal. The Army has been implementing these recommendations through the Army Comprehensive Pain Management Campaign Plan which includes efforts to ensure proper use/monitoring of medication use and significant expansion of nonmedication pain treatment modalities.

In June 2011, the Institute of Medicine released the report entitled, "Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research". The IOM report confirmed that overreliance on medication-only management of pain was an issue plaguing medicine in the U.S. and certainly not unique

to the military. In addition to referencing the Army Pain Management Task Force, the IOM report's findings and recommendations largely paralleled those contained in the Army Pain Management Task Force Report.

*Question.* What alternative options of pain management does the Army have in place to give doctors a choice to lessen the use of prescription pain killers?

Answer. The Army's Comprehensive Pain Management Campaign Plan is operationalizing the Army Pain Management Task Force recommendations to move toward a more holistic, multidisciplinary, and multimodal treatment of pain. This includes standardizing availability and utilization of traditional treatment modalities such as medications, interventional procedures (injections, nerve blocks, and surgeries) and several nontraditional complementary modalities (acupuncture, movement therapy (Yoga), Biofeedback, and medical massage therapy).

Army Medicine is developing capability and experience in providing multidisciplinary and multimodal pain management at eight interdisciplinary pain management centers and their subordinate pain augmentation teams.

*Question.* Does the Army track rates of addiction to prescription pain killers among wounded warriors—how would you know if you had a problem?

Answer. The Army tracks rates of positive urine drug screens among soldiers that represent abuse of illicit and prescription medications. The Army also tracks the number of soldiers enrolled for treatment of substance use disorders. In addition, the Army has put into place policies and practices to provide closer monitoring and support of our wounded warriors who require treatment for their multiple medical and behavioral health conditions, which often includes medications such as painkillers and anti-anxiety medications that have abuse potential. Because these policies and practices are in place, we have a better chance of detecting prescription drug abuse and identifying soldiers in need of intervention and treatment.

*Question.* Peer-reviewed studies demonstrate that servicemembers who incorporate complementary medicine for pain management rely less on prescriptions for pain management. Do you see promise for a more widespread application of this program?

Answer. Yes, the Army is developing capability and experience in providing multidisciplinary and multimodal pain management at eight interdisciplinary pain management centers (IPMC) and their subordinate pain augmentation teams. The Army's Comprehensive Pain Management Campaign Plan (CPMCP) is operationalizing the Army Pain Management Task Force recommendations to move toward a more holistic, multidisciplinary, and multimodal approach to the treatment of pain. This includes standardizing availability and utilization of traditional treatment modalities such as medications, interventional procedures (injections, nerve blocks, and surgeries), and several nontraditional complementary modalities (acupuncture, movement therapy (Yoga), Biofeedback, and medical massage therapy).

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## QUESTION SUBMITTED BY SENATOR THAD COCHRAN

### HYPERBARIC OXYGEN THERAPY

*Question.* General Horoho, I understand that $8.6 million is included to fund a clinical trial using hyperbaric oxygen therapy to diagnose and treat brain injury. What is your experience with this therapy? Do you think it has merit in treating traumatic brain injury?

Answer. Case reports have suggested symptomatic improvement and more modest cognitive improvement in some individuals, but properly designed clinical trials results are still lacking. Departments of Defense (DOD), Veterans Affairs (VA) leaders, and medical professional societies such as the Undersea and Hyperbaric Medical Association and recently the American Psychiatric Association have cautioned that the results of randomized, controlled trials are needed before merit in treating mild traumatic brain injury (mTBI) can be established. In order to evaluate the merit of this potential therapy, the DOD is continuing to fund and execute a series of clinical trials to evaluate hyperbaric oxygen in the rehabilitation of mTBI.

## QUESTIONS SUBMITTED TO MAJOR GENERAL KIMBERLY SINISCALCHI

## QUESTIONS SUBMITTED BY CHAIRMAN DANIEL K. INOUYE

### JOINT NURSING ISSUES

*Question.* General Siniscalchi, how are lessons-learned from joint experiences being leveraged to improve the military health system and ultimately improving health outcomes?

Answer. Lessons learned from Joint experiences have enabled us to focus our efforts on improving the Military Health System and health outcomes by enhancing interoperability through continued partnering with our Sister Services, Veterans Administration, Civilian Healthcare facilities, and other Federal agencies. The Federal Nursing Chiefs are meeting on a regular basis to address common nursing challenges and have developed a strategic plan to advance nursing practice and improve health outcomes, acting as a single voice with a common mission. We continuously strive to decrease variance in patient care delivery as we focus on efficiencies to reduce redundancies to advance the Quadruple Aim: Ready, Better Health, Better Care, and Best Value.

Lessons learned from these experiences also refocused our attention on clinical currency, competency, and sustainment. We built enhanced partnerships with Federal and civilian healthcare facilities to ensure our nurses have robust clinical sustainment training platforms. In 2011, we established 180 training affiliation agreements, 39 of which were specifically for nursing. We are working to enhance clinical sustainment training at our Sustainment of Trauma and Resuscitation Skills Program sites. Training on burn care and pediatric critical care was added to our Center for Sustainment of Trauma and Readiness Skills Centers. To further improve health outcomes based on lessons learned, we changed our clinical skill mix by increasing critical care, emergency/trauma, mental health, and aeromedical evacuation capability. Our 1-year critical care and emergency/trauma fellowships are undergoing major transformations and will be ready to implement in 2013. Our overall number of mental health nurses and mental health nurse practitioners were increased and new roles developed in both the inpatient and outpatient settings. The new mental health course was established at Travis Air Force Base and the mental health nurse practitioner program was established at Uniformed Services University of the Health Sciences.

Our most significant changes, based on lessons learned, were in the area of aeromedical evacuation. Overall requirements for flight nurses and aeromedical technicians were increased. The aeromedical evacuation training platform was redesigned into a modularized, efficient training pipeline with increased proficiency levels and overall reduction in training by 130 days. New clinical protocols for the use of epidural pain management in aeromedical evacuation were established and fielded. New research projects in collaboration with Wright State University, Dayton, Ohio, Air Mobility Command, and the USAF School of Aerospace Medicine were started to improve safe patient hand-offs.

### NURSING RESEARCH ISSUES

*Question.* General Siniscalchi, the TriService Nursing Research Program (TSNRP) has supported innovations in nursing care through competitive grant programs such as the Military Clinician-Initiated Research Award and the Graduate Evidence-Based Practice Award. What are some of the military unique topics that have benefited from these grant programs?

Answer. The TSNRP is the only program with the primary mission of funding military unique and military relevant nursing research studies. Since its beginning in 1992, the TSNRP has funded more than 315 nursing research and evidenced-based practice projects. Under Air Force Colonel Marla De Jong's leadership, the TSNRP established the Military Clinician-Initiated Research Award and the Graduate Evidence-Based Practice Award. The Military Clinician-Initiated Research Award is targeted to nurse clinicians who are well-positioned to identify clinically important research questions and conduct research to answer these questions under the guidance of a mentor. The Graduate Evidence-Based Practice Award is intended for Doctor of Nursing Practice students who will implement the principles of evidence-based practice and translate research evidence into clinical practice, policy, and/or military doctrine. It is critical that the award recipients disseminate the results of their studies so that leaders, educators, and clinicians can apply findings to practice, policy, education, and military doctrine as appropriate. The goal of this grant is to enhance the dissemination and uptake of evidence.

Some of the areas in which research was conducted this year include:

—pain management;
—patient safety;
—post-traumatic stress; and
—women's health.

Research initiatives in patient safety and pain management demonstrated improvement in the safety, quality of care, and management of pain as patients move through aeromedical evacuation continuum. TSNRP is invaluable to these research initiatives that display our commitment to advance nursing practice by fostering a culture of inquiry.

PATIENT-CENTERED MEDICAL HOME

*Question.* General Siniscalchi, how are nonadvanced practice nurses being utilized in advancing the Air Force Family Health Initiative to realize the DOD focus on Patient-Centered Medical Home (PCMH) as a strategy aimed at improving health outcomes while improving efficiencies in care delivery within military treatment facilities?

Answer. The focus of PCMH is to create a partnership between the patient and their healthcare team while empowering the patient with increased responsibility for self-care and monitoring to achieve their goals for health. Our nonadvanced team nurses are integral to the care management and the coordination of patients and focus on prevention and improved health outcomes. The team nurse ensures a smooth care transition as patients pass through the continuum of care. Additionally, they vector high-risk patients to be followed by disease or case managers. The expanded team nurses' roles include disease or case managers; who manage and coordinate care for a target population, or the more complex patients, to improve quality and health outcomes for these defined populations while advocating and incentivizing healthy behaviors. Implementation of PCMH has resulted in decreased emergent and urgent care visits; increased provider, patient, and staff satisfaction; increased provider continuity associated with better health outcomes; and an uncomplicated early transition from a focus on healthcare to health.

TRANSITION FROM WARTIME

*Question.* General Siniscalchi, what specific retention strategies are being developed to entice the best junior and mid-level nurses to continue their nursing careers in uniform?

Answer. We offer many programs to inspire our junior and mid-level nurses to remain on Active Duty. The Incentive Specialty Pay program continues to have a positive impact on retention. We have a robust developmental program for our nurses as they transition from novice to expert. The nurse residency program develops our nurse graduates into fully qualified registered nurses and prepares them for success in their new profession and military nursing. The Nurse Transition Program for new graduates is conducted at one of four Centers of Excellence, two of which are Magnet hospitals. Our developmental career path offers three tracks—clinical, command, and academia—giving nurses the ability to focus in any one of these three areas, while still allowing them to weave in and out at the junior and mid-level points in their career.

Additional force development opportunities include fellowship programs such as critical care, trauma, patient safety, magnet recognitions, leadership, education and training, administration, strategic planning, resourcing, informatics, research, and aeromedical evacuation. We offer advanced academic degree programs such as clinical nurse specialist (CNS), nurse practitioner, and nurse scientist. We partnered with Wright State University, Ohio, in developing a Master's program for a Flight and Disaster Nursing CNS. Our first student graduates in May 2012. Nurses now have the opportunity to pursue a Doctorate of Nursing Practice in the of areas Mental Health, Family Nurse Practitioner and Certified Registered Nurse Anesthetist, in partnership with the Uniformed Services of the Health Sciences. Deployment opportunities provide unique experiences, which were cited as "the most rewarding experience" in the 2010 Tri-Service Nursing Retention Survey. We continue to pursue training affiliations with our Federal partners, civilian institutions, and international partners in order to advance interoperability and skill sustainment.

QUESTIONS SUBMITTED TO REAR ADMIRAL ELIZABETH S. NIEMYER

QUESTIONS SUBMITTED BY CHAIRMAN DANIEL K. INOUYE

JOINT NURSING ISSUES

*Question.* Admiral Niemyer, in recent years we have witnessed the unprecedented alignment of efforts among service medical departments, between Department of Defense (DOD) and Department of Veterans Affairs (VA) medical departments, and between governmental and nongovernmental nurses to deliver care across the spectrum of military treatment facilities, during humanitarian assistance/disaster relief efforts, and wartime missions. What is being done to ensure lessons learned from these opportunities are embedded in future training evolutions?

Answer. Joint and integrated work environments are now the "new order" of business. Navy Medicine enjoys strong collaborative relationships with the Army and Air Force, as well as VA and civilian counterparts. As leaders in Navy Medicine and the Military Healthcare System, Navy nurses possess the necessary skills and experience to promote, build and strengthen strategic partnerships with our military, Federal, and civilian counterparts to improve the healthcare of our beneficiaries.

Within the military treatment facilities (MTFs), lessons learned are shared and implemented into various training evolutions. Nurse Residency Programs for newly accessioned nurses and command orientation programs are integrated and nurses new to military medicine and/or a joint facility are introduced into a joint culture from day one. The Directors for Nursing Services assigned to our joint facilities have provided video teleconferences throughout Navy MTFs to share lessons learned throughout the enterprise and respond to questions from the field which has also proven to be a vital educational format as we continue to refine a unified culture focused on clinical excellence and professionalism.

A decade of war has resulted in numerous advancements in military medicine from lessons learned by all of the Services. These advancements are incorporated into clinical and operational training evolutions. Examples are the use of tourniquets and procedures for resuscitating casualties such as earlier use of blood products, medications such as QuikClot and Combat Gauze. The Tactical Combat Casualty Care Course has curriculum committee involvement for all Services, as well as civilian experts. Improvements in critical care transport and rapid Medical Evacuation (MEDEVAC) to definitive care has also been incorporated into training. Implementing lessons learned from the Air Force's Critical Care Air Transport Team (CCATT), the Navy is also training and using critical care physicians and nurses in theater to provide critical care transport.

NURSING RESEARCH ISSUES

*Question.* Admiral Niemyer, in last year's testimony you provided an overview of the Navy Nurse Corps' efforts to regionalize nursing research efforts and implement research training to junior officers. How have these efforts impacted current research activities?

Answer. Fundamental to the growth and development of future nurse researchers is the availability of experienced mentors to guide and teach our junior nurses throughout the research process. To this end, we aligned our senior nurse researchers regionally to serve in this role. We have continued our efforts to "invigorate nursing research" at all levels of the organization; however, we have focused additional efforts to promote a culture of clinical inquiry in our junior nurses.

A team is completing the development of a 2–3 day course on implementing evidence-based practice which we plan to present in all three regions by July of this year. This course will educate junior nurses on the process of evaluating the existing body of nursing knowledge and apply this knowledge to improve their nursing practice and advance their skills in the care of patients at the bedside ultimately enhancing patient outcomes. Following this course completion, our regional researchers will mentor the course participants in the initiation of three multisite, regional evidence-based practice projects. The first annual Navy Nurse Corps recognition program to promote and acknowledge excellence in implementing evidence-based practice was launched in February of this year.

As a result of these on-going efforts, we are seeing an increased level of interest in evidence-based practice and increased level of participation in nursing research projects among our junior nurses. Throughout our organization, there continues to be an overwhelming number of nurses participating in the Tri-Service Nursing Research Program Research (TSNRP) Development Course. Navy nurses authored more than 30 publications and provided more than 50 formal presentations at var-

ious professional forums and were awarded $1.5 million in TSNRP funds as principal investigators for numerous projects.

PATIENT-CENTERED MEDICAL HOME

*Question.* Admiral Niemyer, how are advanced practice nurses being utilized to forward the Navy Medical Homeport to realize the DOD focus on Patient-Centered Medical Home to improve health outcomes while improving care delivery within military treatment facilities?

Answer. Transformation to the Navy Medical Homeport (MHP) has changed how patients, team members and providers interact with one another. It uses an integrated healthcare team to deliver the right care, at the right time, by the right person leveraging the skills of all team members to deliver timely, easily accessible quality care.

Advanced practice nurses are at the forefront of MHP implementation across our enterprise. As experienced Primary Care Managers within Navy Medicine, advanced practice nurses are expertly prepared to deliver the highest quality care with the tenets of wellness and preventive care at the center of every encounter. Many are serving as MHP Team Leaders and command champions. In these roles, they are leading the efforts towards achieving National Center for Quality Assurance (NCQA) recognition, the gold standard for recognition of medical home practices in the United States.

Advanced practice nurses have always practiced patient- and family-centered care and will continue to be recognized leaders in this cost-effective, high-quality healthcare delivery model.

TRANSITION FROM WARTIME

*Question.* Admiral Niemyer, Navy Medicine has been involved in several humanitarian assistance/disaster relief (HA/DR) operations utilizing hospital ships, combatant ships, and land forces over the past year. How has the Navy Nurse Corps applied wartime experiences to these noncombat missions?

Answer. Navy nurses are integral members of diverse medical units throughout the Helmand and Nimroz Provinces in Afghanistan. They serve in medical units at forward operating bases, Shock Trauma Platoons (STPs), Forward Resuscitative Surgical Systems (FRSS), and the Multinational Medical Units in Bastion and Kandahar supporting the immediate pre-, intra-, and post-operative phases of care for injured combat casualties.

In accordance with nationally recognized trauma scales, patients treated at the Role 3 in Bastion typically had injuries scoring twice as high as those seen in a Level 1 trauma center in the United States. The advanced clinical expertise and technical skills of nurses gained through their wartime experience have significantly contributed to the unprecedented survival rates of greater than 95 percent. The expertise from wartime experience of our emergency/trauma, critical care, medical/surgical, pediatrics, neonatal intensive care, nurse anesthesia, and nurse practitioner specialties is also vital to the provision of outstanding patient care during HA/DR missions.

Navy nurses are also trained and supported the theater's enroute care mission providing medical support in rotary wing airframes during the transport of casualties to higher levels of care. This skill set is also necessary for the critical care transport and rapid medical evacuation necessary in HA/DR missions.

Navy nurses are primary members of medical stability operations on Embedded Training and Provincial Reconstruction Teams and served as mentors and teachers for Afghan military and civilian medical personnel. They gained experience in working with NATO members and other services, as well as Afghanistan civilians forging collaborative and trusting relationships to improve healthcare delivery systems. This is also a crucial skill set gained through wartime experience invaluable during HA/DR missions to build relationships with our host nation partners and strengthen U.S. maritime security and ultimately improving capability to work together with partner nations in the event of a future disaster.

QUESTIONS SUBMITTED TO MAJOR GENERAL JIMMIE O. KEENAN

QUESTIONS SUBMITTED BY CHAIRMAN DANIEL K. INOUYE

PATIENT CARE TOUCH SYSTEM

*Question.* General Keenan, the Army Nurse Corps launched the Patient Care Touch System in February 2011. How has this approach to nursing practice been integrated with the Army Patient-Centered Medical Home (PCMH) delivery model?

Answer. Patient Caring Touch System and PCMH are complimentary systems. Facilities that are implementing PCMH report that they integrate well and report that the similarities of the team concept facilitate transition of other members of the team, and nursing becomes an important advocate of change. Shared accountability and the unit practice councils help the PCMH team to develop policies and practices and processes that are common to both systems and enables improvements in communication and multidisciplinary collaboration.

TRAINING ARMY NURSE CORPS

*Question.* General Keenan, how has the Army Nurse Corps been changed by 10 years of war and what steps are being taken to ensure the best of the experiences are capitalized upon in training tomorrow's Army Nurse Corps?

Answer. Based upon lessons learned and data in theater, Army Nurses are prepared for deployment by completing individual clinical training. We have developed new nursing skill sets and capabilities such as revision of our critical care nurse training to improve trauma care as well as training our nurses to provide MEDEVAC transport. To ensure capability gaps are addressed in future operations, Army nurses have developed a comprehensive set of policies that address training, equipping, sustainment and practice protocols. The Army Nurse Corps assigns a senior nurse to the Medical Task Force, who is responsible for collaborating with nurses to ensure standards of nursing care are in compliance in a deployed environment.

The Army Nurse Corps has transformed Army Nursing Leader Training through the design and implementation of a career-long iterative group of courses, guided by nationally accepted nurse leader competencies and the Patient Caring Touch System, and gauged by the Leader Capability Map.

NURSES: SERVICE INTEGRATION

*Question.* General Keenan, focusing specifically on the treatment facilities impacted by base realignment and closure (BRAC), how are nurses from the different services being integrated to deliver seamless care to beneficiaries?

Answer. The joint facilities created by BRAC offer the opportunity for the services to collaborate in improving patient care just as we have in 10 years of war together. Many of our officers served in a joint environment overseas and can leverage that experience working at our joint treatment facilities in the continental United States.

Nurses are integrated at all levels of the organization and are delivering seamless care to beneficiaries. Army, Navy, and Air Force nurses work side-by-side in clinical environments at Fort Belvoir Community Hospital and Walter Reed National Military Medical Center. From orientation programs, ongoing training, committee work, and process improvement teams to middle and executive level leadership, nurses from all services collaborate in a very deliberate and integrated environment to provide the best quality care.

*Question.* General Keenan, over the course of history nurses have risen to the challenges of war providing invaluable contributions that have had long-lasting impacts on healthcare. As our Nation has been at war for the past 10 years, what are some of the significant research findings military nurses have contributed to the body of professional knowledge with applications away from the battlefield?

Answer. The Army Nurse Corps is fully engaged in military research related to war. We have nurses assigned to the U.S. Army Institute of Surgical Research (USAISR) which is working to develop lessons learned from the data they have collected from 10 years of war. At USAISR, there is a cell dedicated to Combat Casualty Care Nursing Research.

We also have nurses deployed with the Joint Theatre Trauma System team and the Deployed Combat Casualty Research Team. LTC Elizabeth Mann, of the USAISR, recently co-authored a study on mortality associated with sepsis in burn and trauma patients, which is one of many studies she has been involved with dealing with the challenges with the critically ill patients we have seen return from theatre. The Army Nurse Corps is proactively changing and improving our nursing practice based on the lessons learned.

SUBCOMMITTEE RECESS

Chairman INOUYE. The subcommittee will reconvene on Wednesday, April 18, at 10:30 a.m. to receive testimony from the Missile Defense Agency. Until then, we stand in recess.

[Whereupon, at 11:44 a.m., Wednesday, March 28, the subcommittee was recessed, to reconvene subject to the call of the Chair.]