

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2016

WEDNESDAY, MARCH 25, 2015

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

The subcommittee met at 9 a.m. in room SD-192, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding.

Present: Senators Cochran, Murkowski, Blunt, Daines, Durbin, Mikulski, and Reed.

DEPARTMENT OF DEFENSE

DEFENSE HEALTH PROGRAMS

STATEMENT OF LIEUTENANT GENERAL PATRICIA HOROHO, SURGEON GENERAL, UNITED STATES ARMY

OPENING STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Good morning. The Subcommittee on Defense Appropriations will please come to order. We want to welcome our distinguished panel of witnesses for our hearing this morning. We have the Surgeon General of the Army, Lieutenant General Patricia Horoho; Vice Admiral Matthew Nathan, Surgeon General of the Navy; Lieutenant General Thomas Travis, Surgeon General of the Air Force; and Mr. Christopher Miller, Program Executive Officer of the Defense Health Management Systems.

We appreciate very much your submitting testimony for the record, and we welcome you here to review the budget request regarding the programs under your jurisdiction, as we try to be helpful and responsible in the expenditure of funds. We recognize these are very important national security assets, and we want to be sure that we are supporting you in the efforts you are making to continue to fulfill the missions under your responsibility.

I am going to recognize the distinguished Senator from Illinois, Mr. Durbin, for any comments he would like to make.

STATEMENT OF SENATOR RICHARD J. DURBIN

Senator DURBIN. Thanks, Mr. Chairman. I am glad that we are having this hearing. I want to echo your words and thank General Horoho as well as Admiral Nathan and General Travis not only for appearing today but for their significant service to our country.

I know they are in a period of transition in their military, professional, and personal lives, and I thank you for all that you have

given to this Nation and given to the men and women in uniform during the course of your service.

I am proud this subcommittee has really done some amazing work, particularly over the last several years, to increase the resources available to the Department of Defense (DOD) in the area of medical research. It has made and is making a tremendous difference for our war fighters, from advances to battlefield medicine to extraordinary possibilities in transplantation, orthotics, and prosthetics. Importantly, the impact of these advances is felt across the country and around the world.

We face another tough budget year. I am hoping that research funding will continue to be increased. It is important that we have a trajectory, a positive trajectory, to encourage researchers and to really establish those breakthrough findings that lead to better quality of life for people in the military and around the world.

A lot of challenges—sexual assaults, suicide prevention, the integrated electronic health record program, and the overall Military Health System (MHS)—that a DOD-led review last year found was good but had significant areas in need of improvement. They are important for our ability to make sure we serve the men and women in uniform.

Just a shout out to a home State effort; the James Lovell Federal Health Care facility is unique. It is a joint venture between the Department of Defense and the Veterans Administration (VA). I did not know if this marriage was ever going to take place, and I did not know if it would last once it took place. We were blending together two different Federal agencies, two different cultures, two different recordkeeping systems, two different unions. It was quite a challenge, but we now have 5 years of working together in finding new and more effective ways to deliver healthcare service to the men and women at Great Lakes Naval Training Station, as well as to veterans from that region of my State of Illinois. I hope we will learn some valuable lessons about that and talk about them.

At the same time, we have some new issues, cost of compound pharmaceuticals, which I would not have identified going into this hearing as a problem, but it is a big challenge in terms of resources, the future of TRICARE. We now have the report of the Military Compensation Retirement Commission to take a look at.

We have a lot to look at in light of this hearing and questions today, and I thank the chairman for bringing this together.

Senator COCHRAN. Thank you very much, Senator.

Senator Mikulski has submitted a statement that she would like to have included in the record, without objection.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BARBARA A. MIKULSKI

Thank you Chairman Cochran and Vice Chairman Durbin for convening this hearing to examine the President's fiscal year 2016 budget request for the Department of Defense's Defense Health Programs. I want to thank our witnesses, the Surgeon Generals from the Army, Navy, and Air Force, as well as Mr. Chris Miller, the Program Executive Officer of Defense Health Management Systems.

These witnesses work day in and day out to improve the health of all of our military families. They know that the core of our military is not just weapons, but people. We have been at war for over a decade. Some bear permanent wounds of war, and all bear the permanent impact of war.

Today, we will talk about how to best get care for our military members and their families. Access to great healthcare means ensuring troops injured in battle are given immediate, effective, and great care; ensuring wounded warriors are provided with the very best follow-up care, treatment, and supports when they get home; ensuring that those working on our military bases have access to reliable, undeniable communities that keep them healthy and happy; ensuring returning service men and women have the support services necessary to get—or keep—their healthy as they cope with post-traumatic stress or other conditions; and ensuring family members have the support services they need to help their loved ones heal and to heal themselves and their families. The very best healthcare involves cutting edge medical treatments, but it also involves support systems and community health efforts to help people get—or stay—healthy.

We are all well aware of the very serious medical challenges facing the military today, like post-traumatic stress, brain injuries, amputations and serious trauma from IEDs, and prescription drug abuse. But the military faces other very serious health challenges that often go unrecognized and unpublicized. Obesity costs the military \$1.6 billion annually, only 25 percent of the population is eligible for military service, and it is the leading cause of people being discharged. Tobacco use also costs the military \$1.6 billion annually. In order to tackle all of these health challenges, from post-traumatic stress to obesity to prescription drug abuse. We must do more to create environments that support our military members and families in being healthy.

That's why I am encouraged when the Department of Defense undertakes initiatives like the Healthy Base Initiative. This initiative recognizes that a person's physical health is directly related to their mental wellness, their jobs, and their families. If we want to reduce obesity in the military, we can't just tell people to eat better and exercise more. We have to meet people where they are. We need to have dining facilities on bases serving food that is nutritious and delicious. We need to have commissaries and farmers' markets providing fresh fruit and produce at reasonable prices. Instead, we have too many bases where the only food options are fast-food or vending machines or dining halls that serve liver and onions. We need to do a better job of encouraging active living with options like bike paths and parks. We must make sure that gyms are open at times most convenient for those serving and their families.

If we want to reduce smoking in the military, we have to look broader than just diagnosing a nicotine addiction and putting people on the patch. While that may work for some people, it won't work for everyone. We need to look at what may drive people to smoke, whether its job or family stresses, unhappiness or dissatisfaction. We need to look at the fact that cigarettes are often cheaper on military bases than they are off bases. We, DOD and all Federal health programs, need to think broader about how to really improve the overall health of our Nation. That's where the Healthy Base Initiative comes into play. I am so pleased that DOD launched this initiative and am very proud to have Ft. Meade included.

DOD is working with 14 military installations to improve military health and well-being through prevention-oriented approach. Each base has designed a program that fits their individual needs. All 14 installations are looking to bring healthier food options to bases. USDA is helping with farmers' markets, the Culinary Institute of America and Sam Kass are helping with healthy and tasty foods, and local school districts are getting involved to make sure kids start good behaviors early. I am very encouraged by what I have seen so far and I am really looking forward to hearing DOD's plan, vision, and timeframe for Healthy Base as it enters its next phase.

Those who choose to serve their country deserve the very best healthcare available. Those of us in charge of the Federal checkbook must keep an eye on skyrocketing health costs and come up with solutions that reduce costs and improve health.

Senator COCHRAN. I want to first recognize in this order the witnesses we have in this first panel, Surgeon General of the Army, Lieutenant General Patricia Horoho; Surgeon General of the Navy, Vice Admiral Matthew Nathan; Surgeon General of the Air Force, Lieutenant General Thomas Travis; and Executive Officer of the Defense Health Management Systems, Mr. Chris Miller.

Lieutenant General Patricia Horoho, welcome. You may proceed with your comments or statement.

SUMMARY STATEMENT OF LIEUTENANT GENERAL PATRICIA HOROHO

General HOROHO. Thank you, sir. Chairman Cochran, Ranking Member Durbin, and distinguished members of the subcommittee, thank you very much for this opportunity to tell Army Medicine's story.

On behalf of the dedicated soldiers and civilians that make up Army Medicine, I extend our appreciation to Congress for your support. I want to acknowledge America's sons and daughters who are in harm's way; over 141,000 soldiers are deployed or forward stationed. Army Medicine has nearly 2,500 soldiers and civilians deployed around the globe.

This has been a year of unprecedented challenges and accomplishments. Army Medicine trained every soldier deploying to West Africa to ensure their safety. Medical research teams from MRMCM (Medical Research and Materiel Command) serving with our inter-agency partners spearheaded Ebola efforts on the ground in Liberia and in the lab by developing a groundbreaking vaccine.

Our U.S. treatment facilities were certified as Ebola treatment facilities by the CDC (Centers for Disease Control and Prevention). We made tremendous strides in our transformation to a system for health, and our journey of becoming a high reliability organization for safety and healthcare delivery.

Our soldiers' readiness remains our number one priority. We added combat power back to the force by reducing the number of soldiers who were non-deployable due to health reasons. We also significantly increased medical and dental readiness, and we are enhancing health readiness by weaving the Performance Triad in the "DNA" of our Army. The MHS review validated our pathway to improve safety and quality of care for our soldiers, our family members, and retirees, and the review showed that we are either above or comparable to the best healthcare systems in the Nation.

Our programs and initiatives that contribute to our success are further outlined in my written testimony, and what I would like to do is use the balance of my time to discuss the two major threats that are facing Army Medicine today.

An ever changing security environment demands that Army Medicine diligently maintain a medically ready force and a ready medical force. The first threat is viewing Army Medicine through the lens of a civilian healthcare system.

Army Medicine is so much more. We are national leaders in medicine, dentistry, research, education, training, and public health. These are all intimately linked to soldiers' and our providers' deployment readiness.

Our hospitals are our health readiness platforms, and this crucial link to readiness sets us apart from the civilian healthcare system. Army Medicine provided the majority of operational medicine and combat casualty care in Iraq and Afghanistan that led to a 91 percent survivability rate for wounded servicemembers.

The NATO Medical Center of Excellence adopted key focus areas from our 2011 health service support assessment as best practices and lessons learned.

These invaluable battlefield experiences permeate our education training platforms at Uniformed Services University, AMEDD (U.S.

Army Medical Department) Center & School, the Medical Education and Training Center, and our medical centers.

Any radical departure from our combat tested system would degrade readiness in an environment where the next deployment could be tomorrow.

The second threat to Army Medicine is the return of sequestration. Sequestration would have a significant detrimental impact on our patients, their families, and our medical team. Devastating reductions to both civilian personnel and military would impact every Army Medicine program. Sequestration would cause MEDCOM to close inpatient and ambulatory surgical centers at a number of our military treatment facilities, jeopardizing our ready and deployable medical force.

Reductions driven by sequestration would be devastating and very different from our current right sizing to currently align our medical capabilities. Our valued civilian employees were extremely sensitive to the furloughs and hiring freeze in 2013. Two years later, we still have not been able to replace all of these highly skilled employees.

PREPARED STATEMENT

Servicemembers go into battle confident because Army Medicine in concert with our sister services goes with them. For the past 13 years, when wounded servicemembers on the battlefield heard the rotors of a Medivac helicopter, they believed they were going to survive. We must protect the system that gave them that confidence.

I would like to thank my partners in the Department of Defense, the VA, my colleagues here on the panel, and Congress for your continued support. The Army Medicine team is proudly serving to heal and very honored to serve.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL PATRICIA D. HOROHO

Chairman Cochran, Ranking Member Durbin, and distinguished members of the subcommittee, thank you for the opportunity to tell the Army Medicine story and highlight the incredible work of the dedicated men and women with whom I am truly honored to serve.

I would like to start by acknowledging America's sons and daughters who are still in harm's way—today nine of ten Active Army and two Army National Guard division headquarters are committed in support of Combatant Commanders across the globe. More than 141,000 Soldiers are deployed or forward stationed and 18,000 Reserve Soldiers are mobilized, sacrificing for our freedom. And to the thousands of Army Medicine personnel currently deployed in support of global engagements—they and their Families are in my thoughts, making me proud to serve as The Surgeon General of the Army. In the past we spoke of interwar periods, a time to recover, to take a knee. I do not see this recovery period on the horizon...as reflected in our current deployment levels, the op-tempo around the world is accelerating with an ever changing security environment.

Since 1775, America's medical personnel have stood shoulder-to-shoulder with our fighting troops in harm's way, received them at home when they returned, and worked tirelessly to restore their health, both mental and physical. Our world-class combat casualty care, which extends from the medic on the front lines to our CONUS-based medical centers, has resulted in the highest survivability rates in the history of modern warfare. Throughout the most challenging times our Nation has faced, our Soldiers remained confident and mission-focused, knowing when they looked over their shoulder, an Army Medic would be following in their footsteps. While the wounds of war have been ours to mend and heal, our extraordinarily tal-

ented medical force also has cared for the non-combat injuries and illnesses of our Soldiers and their Families, in theater as well as at home.

Army Medicine is comprised of a committed team of over 150,000 Active Duty, Reserve Component, Civilian and Contract professionals who serve in over five continents, across 18 time zones, providing cutting edge medical readiness and healthcare throughout the world. Army medicine is so much more than a civilian healthcare system; we are national leaders in medicine, dentistry, medical research, education, and training, and public health. It is an honor to lead this outstanding enterprise, earning the trust and caring honorably and compassionately for our 3.9 million Soldiers, Family Members, and Retirees across the globe.

Today, Army Medicine provides high quality, safe healthcare, while working tirelessly to optimize the readiness, resilience, and performance of our Forces. We continue to focus our efforts across our enduring four priorities: deployment medicine and casualty care; readiness and health of the force; a ready and deployable medical force; and the health of Families and Retirees. These four priorities are engrained in our DNA and drive all that we do; they span the entire spectrum of health readiness delivery from medics saving lives on the battlefield to researchers discovering new vaccinations in our labs across the globe.

Over the last few years, we have made great strides in improving the health readiness of the force, leading the Army's cultural change towards a more ready and resilient Soldier. This success was achieved by promoting the Performance Triad, comprised of healthy sleep, activity, and nutrition, and increasing the impact on our readiness touch points to include embedded providers, Soldier Centered Medical Homes, dental clinics, and garrison medical facilities. Our medical force has remained ready and deployable, leveraging lessons learned in theater to improve care in garrison, and using evidenced-based practice and cutting edge research to improve care delivered far forward.

Clearly, now is not the time to waver in the support we provide to our Nation's heroes. We not only have to keep the faith and provide for those who are still recovering from the visible and invisible wounds of war, but we also need to remain trained and ready to respond to emerging crises around the world, from Ebola to the Ukraine. The increasing instability across the globe demands that we ensure the health readiness of our Soldiers while sustaining our ready medical force. Our Military Treatment Facilities (MTFs) are vital to this as they are our Health Readiness and Training platforms where our medical teams work together to hone their critical wartime skills and remain ever ready.

These complex and uncertain times require that we continue our unwavering dedication to our enduring missions, transform from a healthcare system to a System for Health, persist in our efforts to demonstrate the characteristics and behaviors of a high reliability organization, and lead the way with innovative research, diplomacy, and collaboration. However, all the lessons learned and progress we have made as a result of the last 13 plus years of persistent conflict and our focused efforts at continuous improvement along our four priorities are at risk of being slowed, halted, and reversed, given an unstable funding environment and the detrimental second-and third-order effects of sequestration.

CONSEQUENCES OF SEQUESTRATION

There is no doubt sequestration has had and will continue to have a significant negative impact on the Army Medical Command (MEDCOM). This impact is felt particularly hard with our dedicated and absolutely essential civilian staff. While many think of MEDCOM as green suit healthcare providers, the reality is civilian employees comprise 60 percent of the MEDCOM workforce. They are the backbone, stability, and glue of our system.

Sequestration in fiscal year 2013, combined with the furlough and hiring freeze, had a profound impact on MEDCOM. Our valued civilian employees were extremely sensitive to the tumult and uncertainty caused by sequestration. Many high performing and valued civilian employees experienced burn out, lost faith, and left the MEDCOM for employment with organizations that were not affected by sequestration, such as the VA. The remaining workforce was challenged to absorb the work of departed personnel. In some cases, reduced staffing led to a negative cycle of decreased access for some beneficiaries resulting in a corresponding reduction in patient loyalty. In addition, the hiring freeze instituted from January through December 2013 inhibited our ability to replace the employees who departed the MEDCOM. Despite aggressive hiring actions since 2014, MEDCOM has not yet regained the lost civilian personnel. As of January 2015, we continue to have a shortfall of over 1,800 civilians.

Sequestration would force us to suspend all discretionary spending, including capital equipment, facility restoration & modernization, sustainment and procurement. Additionally, this would place significant constraints on all non-healthcare delivery spending, such as training, education and public health. Every effort would be made to protect primary care, behavioral health (BH), specialty care, surgical capabilities, inpatient services, and healthcare delivery at our largest MTFs, in addition to world-wide public health/veterinary services (food and water source inspections) to protect required go-to-war clinical capabilities. Based on our experience from the 2013 Sequester, we expect to lose an additional 3,000 civilians across the command.

With a reduced civilian workforce, sequestration will also lead to reductions in military end-strength in the MEDCOM. The Army is preparing to drawdown to an Active Duty end strength of 450,000 Soldiers that will result in a reduction of more than 800 active duty MEDCOM personnel. If sequestration returns, the Army may be compelled to reduce active duty end-strength to 420,000, leading to an anticipated reduction of greater than 3,000 active duty MEDCOM personnel.

We will not compromise the safety of our patients as a result of sequestration; however, the combination of military and civilian reductions will cause the MEDCOM to close inpatient and ambulatory surgical centers at a number of MTFs. This would severely impact our ability to support the health readiness of our Soldiers, impact the readiness of our providers, and break trust with our Soldiers, Families, and Retirees, by forcing them to the TRICARE network.

I have grave concerns essential programs for rebuilding our Soldiers after over a decade of conflict will take the brunt of these cuts. The impacts will be visible in decreased resources to sustain initiatives in BH and Traumatic Brain Injury (TBI); a decrease in access to care; and extended appointment wait times for our Soldiers, Families, and Retirees at our health readiness platforms. MEDCOM would reduce research and training programs throughout the Command to "must-fund" levels. This will significantly reduce progress that has been made in medical programs over the last few years both in the areas of research and training of the force.

With this said, we have every intention to work diligently to maintain our progress, and act as faithful stewards of all that we are provided.

UNWAVERING DEDICATION TO ENDURING MISSIONS

Even as the Army shifts from years of continuous war, ongoing operations demand that Army Medicine sustains the enduring missions essential to the health and wellness of our Soldiers. These enduring missions include Warrior Care, BH, Tele-health, TBI, the role of women in the Army, and Sexual Harassment/Assault Response and Prevention (SHARP). These programs are the backbone for restoring and then optimizing the health readiness of our Soldiers and preparing them for future global engagements or transition to their post-Army careers.

Warrior Care

Caring for our wounded, ill, and injured is our highest calling. We must continue to ensure they are provided the best healthcare possible to remain on active duty or to successfully transition out of military service back to Hometown, USA. Warrior Care is an enduring mission for the Army and Army Medicine. It remains fully funded despite budget turmoil.

Over the past 7 years, there has been significant investment in the development of the Warrior Care and Transition Program (WCTP). WCTP personnel are committed to providing the best care and treatment for every wounded, ill, or injured Soldier. As of February, 2015, a total of 66,113 Soldiers have completed the WCTP with 29,492 of these Soldiers returning back to the force. This unprecedented 45 percent return-to-duty rate is a direct result of the dedication of our Wounded Warrior cadre, clinical providers, and support staff.

From February 2014 through February 2015, the overall Wounded Warrior population decreased by more than 40 percent, from 7,008 to 3,996. This is largely attributed to the drawdown of forces in Afghanistan. The Warrior Transition Command (WTC) conducts an analysis twice yearly to ensure that Warrior Transition Units (WTU) are properly structured to provide optimal care for our wounded, ill, and injured Soldiers. As the wounded, ill and injured population continues to decline, we will make recommendations to the Army to right size the WCTP footprint to meet the population needs while still sustaining the high quality care we provide today, regardless of the population.

As a result of the analysis completed during fiscal year 2013, The WTC successfully inactivated five WTUs and all nine Community Based WTUs (CBWTU) in fiscal year 2014. Additionally, 11 Community Care Units (CCUs) were activated. CCUs improve care for assigned Soldiers, provide better access to resources on installations, and reduce delays in care. Soldiers reassigned to a CCU from an inactivating

CBWTU maintained continuity of care with their same primary care team within their local community. In addition, no Soldiers receiving care within the WCTP had to move or PCS due to an inactivating or activating CCU. As of February 1, 2015, a total of 677 Soldiers (17 percent of the total population) were assigned to a CCU receiving care in their home communities.

The WCTP remains committed to returning Soldiers to duty. However, when Soldiers are unable to return to duty, we are dedicated to supporting a seamless transition to ensure their continued success. Approximately 60 percent of Soldiers in the WTUs are enrolled in the Integrated Disability Evaluation System (IDES). MEDCOM, in collaboration with the VA, continues to improve guidance to increase standardization and reduce variation within the Medical Evaluation Board (MEB) phase of the IDES process. In 2014, Army Medicine launched the Medical Evaluation Board Remote Operating Centers (MEBROCs) to increase IDES enterprise capacity. As a result of this monumental effort, the total Army average for the MEB Phase has remained below the 100-day active duty and a 140 day Reserve Component standard across all components for 16 consecutive months. Additionally, the efficiencies created by the IDES Service Line led to an overall savings of \$12.8M in 2014. These improvements not only benefit our wounded, injured, or ill Soldiers and their Families, but also maintain the overall medical readiness of our total force enabling the Army to fully support future global engagements.

As the WCTP shifts to aiding a population more likely to be ill or injured rather than wounded, our Cadre training is continuously refined to meet the needs of the Soldier. The WTC recently finalized a draft Army Regulation as a single source document which consolidated all existing WCTP policies. The draft Army Regulation is being staffed and will be released in the coming months. A newly created WCTP Soldier and Leader Guide offers practical guidance to facilitate the recovery and transition of Soldiers and their Families. The Army Medical Department Center & School (AMEDDC&S), in coordination with the WTC, provides a comprehensive, blended-learning training program to better prepare Soldiers from all Military Occupational Specialties (MOSs) to serve as cadre in the WTUs. The training program orients new cadre and nurse case managers to this very unique environment where physical injuries, PTSD and other BH issues, and Family concerns are commonplace.

Career and Education Readiness activities are the centerpiece of an effective transition from the Army for Wounded, Ill and Injured Soldiers. WTC's coordination of enhanced WTU vocational, career opportunities and programs in coordination with Army G-1's Soldier for Life (SFL) Transition Assistance Program (TAP) and other external resources, is successfully preparing Soldiers for post-Army employment, education, and independent living services. SFL TAP provides robust transition assistance as part of the new Veterans Opportunity to Work initiative which is available to all eligible Soldiers. Soldiers complete a 12 month post-transition budget, identify any skill gaps during a Military Occupational Specialty crosswalk with civilian occupations, and complete career assessments in order to effectively make future career decisions.

The Soldier will always be the center of gravity for our Army and Army Medicine. The optimized WCTP will remain an enduring program that helps fulfill the Army's commitment to never leave a fallen comrade.

Behavioral Health (BH)

The longest period of conflict in our Nation's history has undeniably inflicted physical, mental and emotional wounds to the men and women serving in the Army—and to their Families. The majority of our Soldiers have been extremely resilient during this period and are thriving. However, Army Medicine is keenly aware of the unique stressors facing Soldiers and Families today, and continues to address these issues on several fronts. Taking care of our own—mentally, emotionally, and physically—is the foundation of the Army's culture and ethos, and is unquestionably an enduring mission.

Army Medicine anticipates sustained growth in BH care requirements. In fiscal year 2015, the Army will resource an estimated \$350 million to support BH and sustained implementation of BH initiatives. These funds specifically support the 11 recognized enterprise BH Service Line (BHSL) clinical programs under each MTF's standardized Department of Behavioral Health.

The Army's continued emphasis to extend BH care to Soldiers and Families and decrease stigma is likely to increase the use of BH care. The readiness of the force is contingent upon providing access to high-quality BH care to Soldiers and Family Members. The Army's BH System of Care (BHSOC) standardizes and integrates the best clinical practices into a single, interconnected system. It supports the readiness of the force by promoting health, identifying BH issues early, delivering evidence-

based treatment, and leveraging all resources in the Army community to decrease risk for suicide and other adverse events.

The Army screens Soldiers for BH conditions, including PTSD, at several points in the Force Generation cycle. The Army's screening program includes assessments before and after every deployment and annually, exceeding the DOD requirements. The Army also screens for BH conditions at primary care visits and has placed BH professionals in Patient Centered Medical Homes (PCMHs) to expedite consultation and treatment. As MEDCOM expanded access to the BHSOC, utilization of outpatient BH increased from approximately 900,000 encounters in fiscal year 2007 to over 2.1 million in fiscal year 2014. Soldiers with BH conditions used outpatient BH care more frequently to address BH issues and fewer acute crises have occurred. Soldiers required 173,000 inpatient BH bed-days in 2012, but only 112,000 in 2014. We are also confident the BHSOC, along with the Army's Suicide Prevention Programs, contributed to the decrease in suicides from 2012 to 2014.

The Army is removing the stigma associated with seeking BH care with programs such as Embedded BH (EBH) that provides targeted care in close proximity to Soldiers' unit areas and in close coordination with unit leaders. As of January 2015, Army Medicine has 49 EBH teams, including 10 that were established in 2014. Of these, 36 directly support Brigade Combat Teams (BCTs), while the remaining 13 support non-BCT operational units including military police and combat engineers. By fiscal year 2016, we expect to have 65 EBH teams operational.

In 2014, Army Medicine implemented the BH Data Portal (BHDP) at every MTF. BHDP is a web-based application that gathers standardized, automated clinical data from Soldiers receiving care for BH conditions. It tracks patient outcomes, satisfaction, and risk factors to improve program assessment and treatment efficacy. This innovative program was identified by the DOD as a best practice and selected to be implemented across the other Services. Additionally, it was cited in the August 2014 President's executive actions on improving BH services throughout the DOD.

We continue to use complementary and alternative therapies to decrease the use of psychotropic drugs. The use of psychotropic drugs in Soldiers is trending down. From 2012 to 2014, the rate of prescribed psychotropic drug use decreased from 23.15 percent to 20.7 percent. This is a direct result of our BH support programs and management of these conditions through evidence based non-medication regimens.

Due to the significant national shortage of child and adolescent BH providers, traditional models of care have been unsuccessful in delivering services to Family Members. In response, Army Medicine implemented the Child and Family Behavioral Health System (CAFBHS) in March 2014, a new and innovative method to deliver BH care to Army Families. The CAFBHS more efficiently delivers care by consulting and collaborating with primary care teams in the PCMH, placing BH providers in on-post schools, and using regional tele-consultation to increase access to BH care. In addition, primary care managers are trained in the screening and treatment of common BH disorders within the PCMH. There are currently 150 BH providers working in the CAFBHS, including 50 providers in 46 schools at 8 installations. Over the next 2 years, CAFBHS will increase to 381 BH providers supporting 107 schools across 32 installations delivering comprehensive BH support to Army Families.

Tele-health

The expansion of Tele-health (TH) capability is a vehicle for Army Medicine to expand our influence into the Lifespace of our Soldiers, Families, Retirees, and Civilians. TH is the future of medicine and a core clinical capability of Army Medicine that can increase access to care, reduce cost, and alleviate quality and readiness challenges. Army TH currently provides clinical services across the largest geographic area of any TH system in the world including 18 time zones in over 30 countries and territories across all five Regional Medical Commands (RMCs) and in active theaters of operation. Army TH accounts for over 95 percent of all clinical TH encounters in the DOD.

During fiscal years 2008–2014, Army TH provided over 150,000 provider-patient encounters and provider-to-provider consultations in garrison and operational environments across 30 specialties. Tele-BH (TBH) currently accounts for 88 percent of total TH volume in garrison and 58 percent in the operational environment. Army Medicine currently executes approximately \$21 million per year on clinical uses of TH such as TBH. Additionally, the Army developed and uses mobile health applications for beneficiaries with TBI and is expanding its use of educational systems as a force multiplier for Pain Management.

In fiscal year 2015, Army Medicine is introducing a 3-year expansion plan for TH to create a Connected, Consistent Patient Experience (CCPE). The CCPE will create

a 360° care continuum around patients using advanced TH modalities. The core elements of the CCPE include establishing a Virtual PCMH, optimizing provider-to-provider tele-consultations systems, expanding clinical video-teleconferencing systems to new specialties, piloting remote health monitoring, and continuing to mature Army TH in operational environments.

Traumatic Brain Injury

Another enduring mission is our focus on providing our Soldiers and other beneficiaries the very best TBI care in the Nation. From January 1, 2000, through June 2014, approximately 307,283 Service Members have been diagnosed with TBI, with 253,350 (82 percent) of these injuries being classified as mild TBI (mTBI), or concussions. Since 2000, Army Soldiers comprise approximately 58 percent of all DOD TBI cases, making this issue a clear priority for Army Medicine. The number of Soldiers diagnosed with concussions has steadily increased among all Army components, with the sharp increases beginning in 2006 attributable, in part, to screening efforts and other early detection initiatives.

The Army TBI Program continues to build on innovations, partnerships, and research to better prevent, diagnose, treat and track mTBI and concussion as we transition from a conflict-focused to garrison-focused program. This program focuses on five essential elements: A mandatory education component for all Army personnel; one worldwide standard of care for assessing and treating Soldiers who may have been exposed to a potentially concussive event; an expansive garrison clinical care program to meet the medical and rehabilitation needs of patients with all severities of TBI; baseline neurocognitive testing of all deploying Soldiers; and an aggressive research program to advance mTBI and concussion diagnosis and treatment. Through collaborations with the National Football League and the National Collegiate Athletic Association, the Army is increasing awareness, reducing stigma associated with seeking care, and changing the culture regarding brain injuries on the battlefield and at home.

The Army accepted a proffer from the Intrepid Fallen Heroes Fund to build six centers devoted to advanced treatment of complex mTBI. These Intrepid Spirit clinics will provide advanced integrative care and intensive outpatient programs for patients with multiple diagnoses (to include TBI, chronic pain, and BH conditions). Intrepid Spirit Fort Campbell opened on September 8, 2014, and facilities at Fort Hood and Fort Bragg are expected to be completed by November 2015. Army Intrepid Spirit Clinics are programmed for Joint Base Lewis-McChord and Forts Carson and Bliss.

The Army manages the largest portfolio of TBI-related research in the world, with an investment of over \$800 million since 2007. For fiscal year 2015, the total expenditures are estimated at \$96 million, with the bulk of TBI funding from DHP Congressional Special Interest (CSI) funding. As of June 2014, over 590 research projects have been awarded or are pending award. Research is ongoing across the continuum of care from prevention, early screening and identification, to better diagnostic tools, imaging, and treatment options, to rehabilitation and return to duty determinations. From a treatment perspective, the Medical Research and Materiel Command is dedicated to developing FDA-approved therapies designed to assess and treat the injured brain. These innovations will ensure those without injury can stay in the fight, while those who are diagnosed are effectively treated to preserve their future health.

Additionally, we are leveraging the strength of multiple agencies, including the Defense Centers of Excellence for Psychological Health and TBI (DCoE), the Defense and Veterans Brain Injury Center (DVBIC), our sister Services and the VA to translate research findings into the latest guidelines, products, and technologies.

Women in the Army

Women have played a key role in America's military efforts since the Revolutionary War. Time and time again they have proved their value in all operational and garrison environments. From the medic on the battlefield, to the civil affairs officer, women in uniform have been an irreplaceable asset to our Nation. Advances in medical care and research that enhance the health, performance and readiness of female Soldiers and Family Members are improving the readiness of our Total Army Family.

The Army continues to open previously closed positions and occupational specialties to women. Over the past 27 months, the Army opened six previously closed MOSs and over 55,000 positions across all Army components. Army Medicine is providing direct support to the Soldier 2020 initiative led by the U.S. Army Training and Doctrine Command (TRADOC) and Army G-1 to identify, select, and train the best-qualified Soldiers for each MOS.

The U.S. Army Research Institute of Environmental Medicine (USARIEM) supports TRADOC in conducting the “Physical Demands Study” to establish occupational-specific accession standards for the combat arms specialties currently closed to women. The goal is to develop valid, safe, legally defensible physical performance tests that predict a Soldier’s ability to perform the critical, physically demanding occupational tasks of currently closed MOSs. The Army’s scientific approach for evaluating and validating MOS-specific performance standards aids leadership in selecting and training Soldiers, regardless of gender, to safely perform the physically demanding tasks of their Army occupation. This approach will ensure that standards are maintained and will give every Soldier the opportunity to serve in positions where he or she is capable of performing to standard.

In July of 2011, I had the distinct honor to deploy in support of the International Security Assistance Force in Afghanistan to examine healthcare in the Central Command Area of Responsibility. Specifically, the team focused on readiness, resilience, MEDEVAC enhancements, medical information technology, education and training, and enhancements to Body Armor. Recently, the lessons learned were adopted by 15 NATO partners at the Military Medicine World Conference in Budapest, Hungary.

Our work on the ground served as the foundation for the Women’s Health recommendations in the Health Services Support Assessment in May 2012, the establishment of the Women’s Health Task Force, and the creation of 26 tasks focused on supporting female Soldiers in austere deployed environments. We established standardized education for healthcare providers and treatment algorithms throughout theater to avoid unwarranted movement of women inside a combat zone for care allowing Soldiers to focus on the primary mission. These and other efforts across the Army served as the preamble for integrating women into expanded roles and opportunities while protecting them from illness and disease.

The Women’s Health Task Force is now issuing its final report after making significant progress on a number of fronts and transitioning their work to our institutional organizations. Key accomplishments include: helping develop female specific body armor, introducing devices and exploring the feasibility and utility of self-diagnosis kits, updates to training curriculum, establishing a women’s health Internet portal, and addressing mental health and SHARP issues in a deployed environment. I am very proud of the team and the tremendous contributions they have made to our Army.

The Women’s Health Service Line (WHSL) is dedicated to ensuring safe, quality patient care and a consistent patient experience across the enterprise. Their efforts focus on wellness and readiness, perinatal, and operational medicine in areas such as group prenatal care, cancer prevention, and postpartum readiness have been instrumental in improving healthcare outcomes and patient satisfaction. Human Papillomavirus (HPV) is the primary causative agent for cervical cancer and, according to the National Cancer Institute, is responsible for nearly of all vaginal cancers. Partnered with an education component, WHSL has taken the lead in the effort to vaccinate both boys and girls beginning at age 11 and as late as 26 years old to stamp out this preventable disease.

Sexual Assault/Sexual Harassment Prevention

The Army and Army Medicine continue to attack the complex challenges of sexual assault. While we have made much progress, much work remains. Sexual assault and harassment directly contradict Army Values. These acts degrade our readiness by negatively impacting the male and female survivors who serve within our units; it also negatively impacts other Soldiers exposed to this behavior.

As an integral participant in the Army’s Sexual Harassment/Assault Response and Prevention (SHARP) program, Army Medicine continues to be at the forefront of the management, regulatory guidance, and oversight of care for all sexual assault victims. Regardless of evidence of physical injury, all patients presenting to our health readiness platforms with an allegation of sexual assault receive comprehensive and compassionate treatment. They are offered a Sexual Assault Forensic Examination (SAFE) by a trained and competent Sexual Assault Medical Forensic Examiner (SAMFE) within our military health system or at a local facility through a memorandum of agreement. Seamless follow-on care is coordinated and managed through the sexual assault medical management team who are a designated multidisciplinary group of healthcare providers who coordinate with the Sexual Assault Response Coordinators (SARCs) and Victim Advocates (VAs) to develop a care plan based upon the patients input and needs. Army Medicine has 217 SARCs and VAs. Furthermore, there are 118 qualified SAMFEs supporting 32 MTFs, meeting the 2014 NDAA requirement to have a Sexual Assault Nurse Examiner at each of our 20 MTFs with a 24-hour emergency room capability.

The AMEDD SAMFE training meets CENTCOM pre-deployment requirements for healthcare providers assigned to Role II and Role III healthcare facilities. To support pre-deployment and local SAMFE requirements, the MEDCOM SHARP Program Office hosted and trained 141 SAMFEs in fiscal year 2014. Army Medicine is in the process of aligning our SAMFE training in the AMEDDC&S and developing a certification process for all SAMFEs. The 2015 NDAA directs that our SAMFEs are trained and certified; with these changes to our curriculum, not only do we meet the requirements of the NDAA 2015, but we establish ourselves as a lead and benchmark for the DOD.

TRANSITIONING FROM A HEALTHCARE SYSTEM TO A SYSTEM FOR HEALTH

Army Medicine has made great progress over the last 3 years in our transition from a Healthcare System to a System for Health (SFH). Health is a critical enabler of readiness, and Army Medicine is a valuable partner in making our Force “Army Strong.” In 2012, we began our journey to aggressively transition from a healthcare system—a system that primarily focused on injuries and illness—to a System for Health that now incorporates and balances health, prevention and wellness as a critical enabler for readiness. This also moves our health activities outside of the “brick and mortar” facility, brings it outside of the doctor’s office visit, and into the Lifespace where more than 99 percent of time is spent and decisions are made each day that truly impact health. Our efforts to transform to a System for Health are aligned along three lines of effort focusing on the Performance Triad, Delivery of Health, and Healthy Environments.

The Performance Triad

The strength of the Army and the cornerstone of landpower’s historical and future success hinges on the human dimension—the Soldier. Yet, daily, over 43,000 Soldiers, or the equivalent of 12 Brigade Combat Teams, are non-deployable; annually, 10 million duty-days are limited or lost related to injuries, 80 percent of which are preventable. As the Army faces a draw down, it remains obligated to provide a Total Force that is ready for any mission in a complex world with an ever changing geopolitical landscape.

The impacts of restful sleep, regular physical activity, and good nutrition are visible in both the short- and long-term. The Performance Triad is a solution and key enabler to augment individual and unit readiness. It optimizes Soldier performance, and tackles the non-deployable and injury challenges by teaching, coaching, and mentoring Soldiers and Families to improve health related behaviors. The Performance Triad empowers them to take personal responsibility for the betterment of their health readiness, resilience and performance. The Performance Triad is a lifestyle, a way of being, and represents how to impact the Lifespace of the Total Force—where people live, work, and play.

The Performance Triad is aligned with the Army Warfighting Challenges, the Human Dimension, and the Chief of Staff of the Army’s Soldier optimization efforts. The Performance Triad enhances readiness by promoting sleep, physical activity, and nutrition through health literacy campaigns delivered through a variety of channels including traditional print, digital and social media. These efforts are targeted to meet the needs of our Soldiers, Families, DA Civilians, and Retirees where they live and work. When individuals and units adopt the tenets of the Triad, they optimize the physical fitness, cognitive dominance, and emotional resilience of the Total Army Family.

Over the past year, the Army completed a 6-month pilot program that tested the Performance Triad curriculum across three active duty battalions, including one deployed to Afghanistan. The results of the pilot project revealed that the majority of Soldiers are not meeting the basic Performance Triad targets essential for readiness, health, and performance. More detailed fiscal year 2014 Performance Triad pilot results revealed that few Soldiers understand how to properly train to be tactical athletes, only 4–5 percent of Soldiers met the sleep targets, only 2–4 percent met all of the nutrition targets, and despite unit physical training, only 29–42 percent met the activity targets. After completion of the program, positive changes included: Soldiers who slept eight hours during the weekends improved from 33 percent to 46 percent, refueling after exercise and fish consumption improved, and overall, 26 to 40 percent of Soldiers improved on the Performance Triad targets. Over 50 percent of Soldiers reported they liked the program, felt the program influenced readiness, would use the information in the future, felt the program was successful, and would recommend Army-wide implementation. From a small unit leadership perspective, Soldiers believed their squad leaders became better coaches over the course of the program.

The feedback and lessons learned from the fiscal year 2014 pilot informed the fiscal year 2015 Performance Triad curriculum revision. Utilizing the revised content, a second pilot will provide training to up to 30,000 active duty Soldiers across Forces Command, the U.S. Army Reserve and National Guard. As part of this pilot, Army Medicine initiated a pilot at the AMEDDC&S in January 2015 within the Basic Officer Leader Course, the Captain's Career Course, and the Non-Commissioned Officer School to teach leaders the importance of practicing the tenets of the Triad in all environments and to be able to impart knowledge within their spheres influence. For military units, the Performance Triad is a squad-leader-led program that provides first-line supervisors easy-to-use tools required to coach, teach, and mentor the tenets of human performance optimization. In support of mission command, the Performance Triad curriculum influences health readiness and serves as a forcing function to synchronize efforts across installations and operationalize policies and programs offering a whole-of-Army approach.

The Army continues to invest in the Performance Triad to achieve the collective vision set forth in the Army Warfighting Challenges, the Human Dimension, and the Ready and Resilient Campaign. The successful Army-wide implementation of Performance Triad tenets will optimize the health readiness, resilience and performance of the Total Force.

Delivery of Health

The Delivery of Health domain focuses on restoring health through providing early access to evidence-based, safe, high quality, person-centered, predictive, proactive and collaborative healthcare while focusing on restoring health and wellness after an injury or illness. Integration of PCMH, SMCH and our health service lines, such as the Physical Performance Service Line, with tools, resources, and pathways to facilitate health, wellness, and readiness is imperative, as are critical programs such as the Army Wellness Centers, Dental "GO First Class," and our focus on optimizing Brain Health.

Musculoskeletal injuries (e.g., low back pain) are the leading reason for Soldiers seeking medical care. Outpatient medical encounter rates for active duty members across all Services nearly doubled between 2002 and 2012. These types of injuries negatively impact military readiness. At any time, 10 percent of active duty Soldiers are non-deployable due to physical profiling for musculoskeletal issues. More than 75 percent of non-battle medical evacuations from Iraq and Afghanistan were for musculoskeletal conditions.

Given the magnitude of this problem, MEDCOM established the Physical Performance Service Line (PPSL) to implement a standardized system of care to address such musculoskeletal health. This service line is focusing on four lines of effort to track the Soldier across the spectrum of musculoskeletal health, from human performance optimization (HPO) and injury prevention (IP) through early identification and expert management of musculoskeletal injuries, and subsequently through rehabilitation and reintegration processes.

PPSL's initial areas of effort included development of an operational training course for embedded physical therapists in the BCTs, development and oversight of musculoskeletal action teams (MATs), standardized Physical Readiness Training-based e-profile templates for upper and lower body injuries, acute and traumatic musculoskeletal injury screening, referral tools for primary care providers, and a standardized aquatic rehabilitation pilot program. They are leading the way in ensuring we are delivering the very best standardized and far forward musculoskeletal care to our Soldiers, Families and Retirees across our System for Health.

Army Wellness Centers (AWC) are also instrumental in assessing and improving the health of the force, especially those who are at increased risk for obesity or other chronic conditions. In fiscal year 2014, the AWC served 27,964 clients of all beneficiary type in 22 locations. An analysis of clients who visited AWCs between October 1, 2010, and September 30, 2014, revealed that of the 7,464 clients who had at least one follow-up BMI assessment (with at least 30 days between assessments), 59 percent saw a statistically significant decrease in BMI. These clients averaged a 4 percent decrease in BMI during this same timeframe.

Another health delivery domain initiative is the dental "GO First Class" readiness program. This has spearheaded dental readiness compliance by combining dental exams with cleanings resulting in a 50 percent reduction in oral disease related to caries (cavities) among active duty Soldiers. The cost savings associated with this initiative has recovered the equivalent of 61 man-years and \$13.5 million in treatment costs across the Army Dental Command.

We also placed a special emphasis on brain health to improve Soldiers' cognition, emotional, and physical strength. Brain health rehabilitation and reconditioning programs assist Soldiers as they return to highest possible level of fitness and readi-

ness. Our goal is to also optimize cognitive and emotional fitness enriched by training, learning, and improving performance in all human domains through attention, reasoning, decisionmaking, problem solving, learning, communicating, and adapting. These programs are an integral step in helping Soldiers and beneficiaries return to a full state of health readiness and performance.

Healthy Environments

Healthy Environments diffuses the SFH into the Lifespace of our beneficiaries through environmental, occupational, and public health programs that promote healthy lifestyles to reduce the likelihood of illness or injury. This requires a “whole Army” approach where everything from physical layouts, installation services, and command policies at installations support this focus on readiness and transition to health. SFH maintains health in safe, sustainable communities which support informed choices and healthy lifestyles through the promotion of Healthy Environments.

Recently on a visit to Fort Campbell, I saw this in action. The hospital has done an outstanding job in focusing on the nutritional aspects of the Performance Triad in addition to sleep and activity. They have a garden where young children come to help tend and are educated on the nutritional aspects of different vegetables. They also took out soda machines and replaced them with healthy drink options. In six weeks they eliminated 600 pounds of sugar being consumed by our Service Members, employees and Family Members. They also moved the dessert bar which was the first thing you saw when you walked into the dining facility to the rear and replaced it with a salad bar. The results were nearly a 50 percent reduction in sales of desserts and a 40 percent increase in sales of salads.

These are only a few examples of the impactful changes our SFH is having across our Army. This momentum absolutely must continue, and will surely pay readiness dividends in the future.

CONTINUOUS JOURNEY TO A HIGH RELIABILITY ORGANIZATION

While our transition to a SFH is relatively new, we have been on a longstanding, continuous journey to fully demonstrate the characteristics and behaviors of a high reliability organization (HRO), and serve as the Nation’s leader in creating a culture of safety in healthcare.

HROs exceed the standards for their industry by having well-established policies and systems in place that ensure consistency of practice and enable them to reach their goals of zero preventable harm, a paramount of patient safety. A HRO is committed to achieving zero preventable harm by successfully limiting the number of errors in an environment where normal accidents can occur due to the risk factors and complexity of the practice. The success of a HRO relies on leadership, an established culture of safety, and robust process improvement initiatives leading to enhanced efficiencies and effectiveness of healthcare delivery culminating in positive patient outcomes.

Recently, Army Medicine completed four of five HRO Regional Command Summits across the United States and Europe. The theme was educating and developing a collective mindfulness on “what we can do today to become an HRO tomorrow.” Command teams were charged with determining actions that can be executed immediately to empower their teams in prioritizing safety in a deliberate approach to patient-centered care and positive outcomes. This effort is a cornerstone to the future of not just Army Medicine, but to healthcare across the globe.

SECDEF MHS Review

In May 2014, the Secretary of Defense ordered the Military Health System (MHS) Review to assess the state of healthcare, patient safety, and quality of care within the MHS. We electively chose to compare ourselves to the best facilities by utilizing quality and safety benchmarks employed by other high performing civilian hospitals. The review concluded that the Army provides high quality care that is safe and timely, and is comparable to the healthcare found across the civilian sector. However, we are not satisfied and will continue to strive to lead American healthcare specifically in the area of patient safety.

This extensive report clearly validated that our transformation to a HRO is the correct course in providing safe and quality care to our Soldiers, Families and all entrusted to our care. Over the next year, transparency will be increased regarding patient safety metrics so our patients and external stakeholders can measure our system against the best in the Nation. The journey to become a HRO will not be complete in the next few years, but will take a generation to achieve our pursuit of zero preventable harm.

Operating Company Model

Army Medicine accelerated our transformation into a HRO with the implementation of the Operating Company Model (OCM) methodology as a means of decreasing variance and improving consistency, clarity, and accountability. Within the OCM framework, we established seven service lines, as previously described in this testimony, that are aligning capabilities to improve patient safety, quality, efficiency, productivity, and financial optimization across multiple clinical domains. The utilization of these service lines and the OCM was a necessary step to further the principles and imperatives of a HRO across the enterprise.

Integrated Resourcing and Incentive System

During these challenging fiscal times, Army Medicine must continue to enhance value across the enterprise and drive the adoption of OCM practices. We have achieved this through the use of a financial incentive model called the Integrated Resourcing and Incentive System (IRIS). IRIS is the vehicle for Army Medicine to ensure that our MTFs are resourced for value production at an adequate level to improve access to care, recapture care, improve satisfaction, improve quality of care and incentivize for improved health outcomes. IRIS is MEDCOM's tool to adequately fund MTFs based on their performance plan to produce quality outcomes and safe delivery of healthcare.

Patient-Centered Medical Home

As part of our ongoing movement to become a HRO, we have focused on not just delivering care, but ensuring superior health outcomes. A major proponent of successful health outcomes for our Soldiers, Families, and beneficiaries is our PCMH model. Army Medicine is a clear leader in transforming primary care within the Military Health System. The PCMH model encompasses all primary care delivery sites in the direct care system, under the umbrella of the Army Medical Home (AMH), including our MTF-based Medical Homes, Community-Based Medical Homes and SCMHs.

Primary Care is delivered through an integrated healthcare team of professionals that proactively engages patients as partners in health. It relies upon building enduring relationships between patients and their provider—doctor, nurse practitioner, physician assistant and the extended team—and a comprehensive and coordinated approach between providers and community services. The AMH is the foundation of Readiness and Health and represents a fundamental change in how we provide comprehensive care to our beneficiaries including primary care, BH, clinical pharmacy, dietetics, physical therapy, and case management. Currently, 137 AMHs across the United States, Europe, and the Pacific are caring for 1.3 million beneficiaries supported by a budget of \$74.3M. All of the AMHs have been recognized by the National Committee for Quality Assurance (NCQA) representing the gold standard of patient-centered medical care.

Army Medical Homes consistently perform better than the historical Army clinic model. They distinctly focus on quality and safety outcomes, medical readiness categories, polypharmacy and BH admission rates, as well as cost containment by decreasing emergency room utilization, medical board timelines, and per capita cost while increasing patient continuity with a focus on wellness. Their overall patient and staff satisfaction is exponentially higher than the historical Army clinic model.

A major initiative introduced in the PCMH to improve readiness of the force and Family health is the integration of clinical pharmacists. Army Medicine recognizes the expanded role of clinical pharmacists to address polypharmacy risk, the use of multiple medications to treat chronic conditions, and adverse drug events that lead to a higher rate of hospital admissions. Integrating clinical pharmacists into PCMHs improves patient quality, safety, and efficiency by decreasing overall healthcare costs, minimizing adverse drug events, reducing hospital admissions and improving patient outcomes. In 2014 Army Medicine programmed \$16 million for fiscal year 2016 to support this critical initiative. This funding is significant because it provides a clinical pharmacist for every 6,500 enrolled beneficiaries, fully integrating clinical pharmacists into medical homes.

Additionally, the MEDCOM Primary Care Service Line initiated a 6-month pilot program at two medical homes to compare the effectiveness of digital versus traditional paper BH screening for depression, PTSD, anxiety, and alcohol misuse. The pilot revealed that digital screening was more than twice as sensitive as paper screening (30 percent versus 12 percent positive response rate). In the digital group, twice as many positive screens were addressed by their primary care manager (PCM) when compared to the paper group. The digital record also provides seamless access by the PCM to review historical response trends resulting in a comprehensive plan of care to more effectively address the condition. On average, there are 25,000

primary care visits per day across Army medicine; this tool could potentially increase access to thousands of patients with unaddressed BH concerns each day. Based on these results the primary care service line is developing a strategy to deploy digital BH screening to all medical homes.

Recognizing a need for increased, confidential interaction between patients and medical providers, the Army Medicine secure messaging system (AMSMS) was developed to provide both patients and providers with additional convenient means of communication through online messaging. Messages from patients are triaged and answered by staff without the challenges of navigating telephonic processes. AMSMS has been deployed throughout all Army Medical Homes. As of September 30, 2014, Army Medicine had nearly 305,000 uniquely connected patients (some could be multiple members in a single Family) with approximately 3,400 registered providers and 6,500 registered support staff, supporting approximately one million messages since its inception. Secure messaging has a 97 percent satisfaction rating. The MHS Review specifically highlighted secure messaging as a powerful tool to help the MHS improve in access, safety, and quality. We are actively conducting a marketing campaign to promote this critical initiative aimed at increasing the number of beneficiaries enrolled in secure messaging.

Surgical Services Line

The Surgical Services Service Line (3SL) is focused on a surgical services model that optimizes the productive, efficient and financially sustainable delivery of surgical care, increasing access to value-based, quality care for beneficiaries across all MTFs. 3SL's success is measured not only by increased access to care for our beneficiaries, cost savings to MEDCOM and higher quality outcomes, but in a ready and deployable medical force, enhanced Soldier readiness and improved combat casualty care. In 2014, 3SL implemented the National Surgical Quality Improvement Program (NSQIP) at all 25 surgical MTFs. Less than 10 percent of all U.S. hospitals that provide surgical care utilize NSQIP. The initiatives spearheaded by 3SL realized an estimated cost savings of \$38 million for in fiscal year 2014. These and many other advances have been the catalyst to move Army Medicine forward and serve as a blueprint to become a HRO.

Clinical Performance Assurance Division

As part of our transition to a HRO, the Clinical Performance Assurance Division (CPAD), containing the Patient Safety Program, was established in 2012 and aligned under the MEDCOM Deputy Commanding General for Operations. The MEDCOM Patient Safety Program, in coordination with regional and MTF Patient Safety Leaders, works to engage leadership at all levels to cultivate a culture of safety environment of trust, transparency, teamwork and communication to improve safety and prevent adverse events. They frequently conduct scheduled and unscheduled visits at the MTF level to address system issues potentially affecting patient safety through training and clinical process review. Since the establishment of CPAD, Army Medicine has made significant progress in the reporting, investigation and mitigation of issues that could cause patients harm.

Partnership for Patients

In 2014, the continued implementation of Partnership for Patients, a national program sponsored by the Centers for Medicare and Medicaid, resulted in a 26 percent decrease in preventable harm events over the last two quarters and a 37 percent decrease overall since Army Medicine implemented the program in 2012. The CPAD medication safety team provided an analysis of workload, resulting in the hiring of 21 clinical pharmacists and 17 pharmacy technicians to increase the oversight of medication safety across Army Medicine. They also petitioned the Drug Enforcement Agency to provide DOD an exemption to allow our pharmacies to take back unused medications including scheduled medications in an effort to provide an increased level of safety for our Army Families.

Team Approach

MEDCOM continues to build a culture of safety through the further incorporation of Team Strategies and Tools to Enhance Performance and Patient Safety (Team STEPPS) to enhance team communication and collaboration so that every team member has a voice in providing health. TeamSTEPPS is an evidence based teamwork system that employs group huddles to encourage open dialogue and synchronization of efforts to optimize the use of information, people, and resources to achieve the best clinical outcomes for patients. TeamSTEPPS was initially deployed across the MEDCOM in 2011 and has led to significant improvements in teamwork and collaboration in critical areas such as our surgical suites and inpatient care areas. The TeamSTEPPS program facilitated the training of over 400 trainers through vir-

tual training programs leading to over 60K medical and dental personnel trained. Additionally, TeamSTEPPS simulation based Operating Room Team training program was facilitated at 12 MTFs since 2012, resulting in the identification and avoidance of potential patient safety incidents while safely increasing operating room efficiency.

Patient CaringTouch System

To reduce variance and improve patient outcomes, the Army Nurse Corps developed and implemented the Patient CaringTouch System (PCTS). The PCTS is a strategic, patient-centered framework for nursing, founded on evidence-based practice and collaboration with America's top performing hospitals. It provides a framework which focuses on patient advocacy, enhanced communication, evidenced based practice, capability building, and healthy work environments.

The PCTS methodology is the foundation for the delivery of high quality, evidence-based care that includes the Family and is driven by patient-centric outcomes. When the five elements are combined synergistically, PCTS improves patient outcomes and nursing staff effectiveness, as well as decreases clinical practice variance. The focus on the patient experience through the implementation of PCTS resulted in a decrease in wait times, increase in attentiveness to patient and Family needs, and increase in patient engagement to discuss symptoms and medications.

LEADING THE WAY

Army Medicine is leading the way in the areas of innovative medical research, diplomacy, and collaboration. History is replete with examples of war serving as a catalyst for medical innovation and of battlefield medicine producing advances in civilian healthcare. For more than 200 years, the Army's efforts to protect Soldiers from emerging health threats have resulted in significant advances in medicine. The U.S. Army Medical Research and Materiel Command (MRMC) is the Army's medical materiel developer responsible for medical research, development, and acquisition and medical logistics management. MRMC's role is to research and develop technologies and tools to ensure our Soldiers remain in optimal health and are equipped to protect themselves from disease and injury, particularly on the battlefield. Research conducted at MRMC thru joint efforts leads to medical solutions—therapeutics, vaccines, diagnostics, and actionable information—that benefit both military personnel and civilians.

More than a decade of war has led to tremendous advances in knowledge and care of combat-related wounds, both physical and mental. Our decisions today must preserve the Army's core medical research competencies and, through continued medical research investments, ensure strategic flexibility to respond to future operational threats. The DOD stands alone as the world's leading organization for trauma research and development.

The Joint Trauma System (JTS) was established in 2006 and is located at the U.S. Army Institute of Surgical Research (ISR), Joint Base San Antonio. Its mission is to improve trauma care delivery and patient outcomes utilizing continuous performance improvement and evidence-based medicine driven by analysis of data maintained in the DOD Trauma Registry. The JTS has collected data from more than 130,000 combat casualty care records from Iraq and Afghanistan. The data have resulted in 39 Clinical Practice Guidelines (CPGs) to provide enduring evidence-based, best-practice recommendations for trauma care. The continuous monitoring and evaluation of outcomes after implementation of the CPGs provides evidence necessary to turn results into improved outcomes for combat casualties. The success of the JTS is clearly reflected through sustainment of the lowest lethality rate ever recorded during our current conflicts.

In conjunction with delivering rapid and effective combat casualty care, the Army continues to refine surgical and hospital capabilities based on lessons learned from the past 13 years of conflict. These initiatives complement our advances in combat casualty care at the point-of-injury to sustain and to increase battlefield survival rates. Lessons learned from the Iraq and Afghanistan theaters of operations led to the clear requirement to make fundamental changes to the design of the Forward Resuscitative Surgical Team (FRST) and the Field Hospital (FH). The key changes to the FRST and FH designs include modularity, scalability, and the ability to conduct split-based operations. The new structure, approved in August 2014 by the Vice Chief of Staff of the Army, will meet the needs of both conventional and non-conventional forces. These enhanced capabilities will be critical to rapidly supporting future operations in various conflict environments across the globe.

MRMC will expertly manage and execute congressional special interest (CSI) funds to meet the intent of Congress, to seek and fund the best science with a keen focus on military relevance, where applicable. The CSI funds are executed through

established, highly effective, efficient, and low cost processes using only approximately 15 percent in research management support costs for the MRMC and the remaining 85 percent of all the CSI funds being placed on awards to maximize the science and the taxpayers' investment.

Historically, infectious diseases are responsible for more U.S. casualties than enemy fire. Continued progress to address these emerging threats requires ongoing commitment to funding, developing personnel with expertise in infectious diseases, and maintaining stateside and overseas laboratory infrastructure and overseas field sites for clinical studies and response to contingencies. The coordinated and swift response to the Ebola virus outbreak demonstrated the value of continued funding in this area.

Army Medicine closely partnered with interagency partners including the Centers for Disease Control and Prevention (CDC) in the domestic and global Ebola virus response. The U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) Diagnostic Systems Division provided Ebola testing capability for the National Laboratory Response Network (LRN), qualification testing for other LRN laboratory use of the FDA Emergency Use Authorization (EUA) Ebola diagnostic assay, and pre-deployment training for laboratory personnel staffing mobile laboratories in Liberia. USAMRIID laboratory personnel, in collaboration with National Institute of Allergy and Infectious Diseases personnel have continuously staffed the Liberian National Reference Laboratory at the Liberian Institute of Biomedical Research, in a host nation capability and capacity development initiative to provide lasting enhancements to laboratory capability that will endure beyond the current outbreak.

MRMC overseas laboratories, the U.S. Army Medical Research Unit-Kenya and Armed Forces Research Institute of Medical Sciences in Thailand, are providing technical support to their host nations' laboratory preparedness and Ebola virus disease (EVD) response planning efforts. Additional EVD research and development efforts executed at MRMC including the Walter Reed Army Institute of Research (WRAIR) and USAMRIID, funded by the Chemical and Biological Defense Program (CBDP), have contributed to the development of investigational EVD therapeutics, vaccines and diagnostics. Vaccine development efforts are being accelerated in response to the current West African outbreak to include several CBDP-funded candidates projected to enter Phase 2–3 clinical testing in early 2015. The MRMC Ebola Response Management Team has developed a proposed organizational framework for DOD and HHS elements to partner and collaborate with other U.S. Government agencies involved in the EVD outbreak, the World Health Organization, non-governmental agencies, and foreign governments (i.e. Liberia, Sierra Leone, and Guinea) to collaboratively engage West Africa in the conduct of clinical trials at the strategic, operational, and tactical levels. The WRAIR HIV program is currently conducting an early Ebola Vaccine Trial in collaboration with National Institutes of Health (NIH)-National Institute of Allergies and Infectious Diseases (NIAID) to test the safety and immunogenicity of an experimental vaccine candidate.

As we globally rebalance to the Pacific, our Soldiers will deploy to areas plagued with endemic infectious diseases such as malaria and dengue, as well as emerging disease threats across 105 million square miles. Experts predict that infectious diseases will be the primary cause of hospitalization of U.S. military in the Asia-Pacific region. In an effort to combat this distinct threat to the force, USAMRMC laboratories continue to build on partnerships with Navy Medicine, Federal agencies, academia, non-governmental organizations, other private entities, and foreign Governments. These relationships leverage resources for continued development of endemic infectious disease treatments, preventive drugs, vaccines, vector control, and diagnostic tools essential to preserving the readiness of the force.

Examples of recent successes include a rapid diagnostic test for cutaneous leishmaniasis, developed by MRMC and industry partners under the U.S. Army Small Business Innovation Research program. This device received FDA clearance in November 2014 and is now commercially available. Additionally, two malaria treatment drugs are expected to be licensed in 2018 and two malaria vaccine candidates are scheduled to be transitioned to advanced development in fiscal year 2017–2018. Early clinical trials have begun on the effectiveness of vaccines targeting hemorrhagic fever and organisms causing bacterial diarrhea.

It is imperative we sustain funding to finalize these revolutionary advances that will not only ensure the safety of our global force, but ultimately save millions of lives across the world.

Education and Training

Army Medicine continues to lead the Nation in attracting and educating the best medical minds. Our Graduate Medical Education (GME) programs and education

programs receive high praise from accredited bodies, and our trainees routinely win military-wide and national level awards for research and academics. Currently, we have 1596 Health Professionals Scholarship Program students in medical, dental, veterinary, optometry, nurse anesthetist, clinical psychiatry and psychiatric nurse schools. Additionally, the Uniformed Services University of the Health Sciences is a critical institution dedicated to developing and training clinicians in leadership, clinical, and combat casualty care as well as operational medicine. Our GME training programs have 1,476 trainees in 148 programs located across 10 of our MTFs. Our GME graduates have continued to exceed the national average pass-rate of 87 percent for specialty board certification exams, with a consistent pass rate of approximately 92 percent for the last 10 years with 95 percent first-time board pass rate last year.

Our education programs have been recognized nationally. The Army Medicine's Physical Therapy Program at Baylor University is currently the 5th ranked program in the country out of over 210 national programs; our graduates have a 100 percent licensure pass rate in the past 3 years and have advanced the science through numerous peer-reviewed journal article publications. U.S. News and World Report most recent survey of graduate schools ranked the U.S. Army Graduate Program in Anesthesia Nursing (USAGPAN) as the number one program in the Nation out of 113 nursing anesthesia programs. Furthermore, it ranked the Army-Baylor University Graduate Program in Health Administration program as the 11th out of 75 national programs. Overall, we not only have the largest training program in the military, we are one of the largest medical education systems in the country.

Global Health Diplomacy

Demand for Army capabilities and presence continues to increase across all Combatant Commands in response to growing and emerging threats. We continue to develop key relationships with our interagency partners and our allies to enhance security cooperation, provide foreign humanitarian assistance, build partner capacity, and participate in multi-lateral exercises. Army Medicine is a key combat multiplier that increases access and collaboration with military medical activities in partnerships across the globe. Increasing health diplomacy offers a collegial and non-threatening means of engaging with partner countries, states and foreign groups. Health in many instances offers access and opens gateways not otherwise available through conventional means.

Establishing and maintaining medical partnerships is crucial to supporting the Army's Regionally Aligned Forces (RAF) construct. Many RAF engagements during 2014 were focused primarily on medical support and humanitarian assistance, especially in Africa, South America and across the Asia Pacific regions. Furthermore, health diplomacy facilitated by Army Medicine personnel has opened dialogues and shaped early working relationships with China, Vietnam and other foreign militaries and groups. These engagements have strengthened our relationship with many of our allied partners throughout the world. For example, just one unit, the 30th Medical Brigade, will complete engagements with 19 partner nations this year alone.

Sustaining the Force through Collaboration

Just as Army Medicine increases engagement with our global partners, we are increasing collaboration with the Department of Veterans Affairs, as well as supporting the establishment of the Defense Health Agency (DHA) to ensure our Soldiers and Veterans have improved access to the care and support they have earned through their distinguished service.

Over the past decade, the Army has increased partnerships with the VA through sharing agreements that provide care to VA beneficiaries in various healthcare facilities that have excess capacity. This enables VA beneficiaries to receive high quality, cost effective, and timely care in locations where the VA may have limited capability or resources. In fiscal year 2014, Army Medicine provided \$49 million in healthcare services to VA beneficiaries at 19 locations across the country. The range of services varies by location and is the result of matching VA's needs with the Army's excess capacity. In some locations, such as Honolulu and El Paso, we provide a broad spectrum of inpatient and outpatient specialty services.

Although Army Medicine does not have any joint facilities with the VA, there are locations where the Army and VA facilities are located in close proximity or connected, but remain distinct organizations with close collaboration. In a new collaborative effort, the Army will occupy a portion of the Major General William H. Gourley VA-DOD Outpatient Clinic in Marina, California. At this location Army staff will provide care to DOD beneficiaries in a DOD clinic imbedded within the larger VA facility. The clinic is expected to open in fiscal year 2017.

Operating as a joint team allows us to share best practices and lessons learned across the services. Together with Dr. Woodson, the Service Surgeons General are working to organize and lead the MHS into the future by building a stronger, even more integrated team. The establishment of a DHA in October 2013 represented a major milestone towards modernization and integration of military medical care.

Army Medicine has been a key contributor to the transition and integration of the ten shared services by providing 643 personnel to the DHA thus far. In the last year, all ten shared services have reached initial operating capability and are expected to reach full operating capability by October 1, 2015, with some possibility of establishing full operating capability ahead of schedule. The AMEDD will continue to drive fundamental changes within the MHS and support these transformation efforts that improve readiness and quality of healthcare while containing costs.

As part of Governance reform, six enhanced Multi-Service Markets (eMSM) were also established covering San Antonio, the Puget Sound, Hawaii, Colorado Springs, Tidewater, and the National Capital Region. The MHS expects substantial savings from these markets because they enable the market manager to cross Service boundaries and shift healthcare from the private sector to military treatment facilities, which are our readiness platforms. This workload recapture directly impacts the readiness of the Army by ensuring providers, nurses, and other clinicians are able to sustain their clinical combat trauma care skills and capabilities. The Army currently is the Service Lead in three markets: Hawaii, Puget Sound, and San Antonio.

CONCLUSION

Army Medicine provides certainty in an uncertain world. We have always been a force enabler, assuring and caring for Soldiers on the battlefield and at home. We have also always been a leader in healthcare and health, contributing enormously to solving military, national, and global health concerns. To adapt from a World War I song lyric: "When we are needed—we are there!"

During these uncertain times, Army Medicine must continue to provide certainty to our Soldiers, Families, and our Retirees. We must deliver on our Nation's obligation to care for our Soldier's needs, restore full function, promote readiness, and optimize their performance. These efforts will provide the foundation for the effectiveness of our entire Army, and play an important role in contributing to global stability.

It is during this time, as we draw down from over 13 years of conflict, that we must ensure that Soldiers and their Families are strengthened with resiliency built to carry them through future global conflicts and hardships. It is during this vital period that Army Medicine will play an essential role as the Army's health readiness platform. I am committed to ensuring that during these drawdown years, our ability to carry out the readiness mission does not diminish. Together, we must keep the momentum going and remain proactive, ensuring our enduring missions, transition to a System for Health and progress toward a high reliability organization with our innovative research, diplomacy, and collaboration continuing full speed ahead.

The fiscal challenges that loom ahead are daunting. However, we will continue to support the Army in any austere environment at home or abroad. These are times of great uncertainty and opportunity, and while there will be many challenges, anything less than our top performance will cost lives. As partners with Congress, I am confident that none of us will allow that to happen on our watch.

Senator COCHRAN. Thank you very much. We are going to recognize each member of the panel for an opening statement, and our next witness is the Surgeon General of the Navy, Vice Admiral Matthew Nathan.

STATEMENT OF VICE ADMIRAL MATTHEW NATHAN, SURGEON GENERAL, UNITED STATES NAVY

Admiral NATHAN. Thank you, sir. Chairman Cochran, Vice Chairman Durbin, distinguished members of the subcommittee, I am grateful for the opportunity to appear before you today on behalf of the dedicated men and women of Navy Medicine. I want to thank the committee for your outstanding support and confidence.

I can report to you that the Navy Medicine team is mission ready and delivering world class care any time, anywhere. Navy Medicine

protects, promotes, and restores the health of sailors and marines around the world, ashore and afloat, in all warfare domains.

We exist to support the operational missions of both the Navy and the Marine Corps. These responsibilities require us to be an agile, expeditionary medical force capable of meeting the demands of crisis response and global maritime security.

In this regard, we are staying the course with our strategic priorities of readiness, value, and jointness. Individually and collectively, these mutually supported focus areas are instrumental in shaping our decisionmaking, internal processes, and organizational capacity.

Our strategy is aligned, balanced, and unified, and I believe strengthened because everyone in Navy Medicine has a distinct and important role in contributing to the success of these efforts.

By leveraging the capabilities of our patient-centered medical home, what we call “medical home port,” and completing our CONUS hospital optimization plan, we are moving more and more workload into our military hospitals, growing our enrollment, re-balancing staff, and reducing overall purchase care expenditures.

We recognize the health of our beneficiaries is the most important outcome and our systems must be aligned to support that priority. Healthcare should not be supply driven or volume based. It is about patient-centered care and focused on all dimensions of wellness with body, mind, and spirit.

We must never waiver in our commitment to provide care and support to our wounded warriors and their families. This is particularly true for the treatment of mental health issues and traumatic brain injury (TBI).

While our present conflicts may be coming to an end, the need for quality mental health and TBI care will continue, and we are posed to provide these services now and in the future.

We continue to embed mental health capabilities in operational units and primary care. We do this in order to identify and manage issues before they manifest to psychological problems or crises. This priority extends to suicide prevention efforts, where we train sailors, marines, and their families to recognize the operational stress, and use tools to manage and reduce its effects.

As leaders, we have renewed our emphasis on ensuring that we focus on every sailor every day, particularly those in transition or facing personal or professional adversity. We know that an increasing sense of community and purpose is an important predictive factor and protective factor in preventing suicide, and we must remain ready and accessible to those who need our help.

Strategically, I am convinced that we are stronger as a result of our work with the other services, our interagency partners, including the VA, leading academics, and private research institutions, and other civilian experts. These collaborations are vital as we leverage efficiencies and best practices in clinical care, as well as research and development, medical education, and global health security.

The enterprise strength of Navy Medicine has been and always will be our people. I can assure you that the men and women serving around the world are truly exceptional and guided by the Navy’s core values of honor, courage, and commitment.

Of note, I am continually inspired by the skill and dedication of our young hospital corpsmen, many of whom may be just out of high school or just out of college, and whose parents, like myself as the father of a teenager, marvel at their ethics and capabilities, but still wince occasionally when turning over the keys to the family vehicle. Yet, they have stepped up. We ask a lot of these young people and they have performed.

As I travel and see our corpsmen operating forward aboard ships or deployed throughout the world, I can assure you, Mr. Chairman, that you and the American people can be very proud of their performance. In fact, of the 15 Silver Stars awarded to sailors during OIF (Operation Iraqi Freedom) and OEF (Operation Enduring Freedom), 14 went to Navy corpsmen.

We need to recognize what sets us apart from civilian medicine. We are truly a rapidly deployable, vertically and fully integrated medical system. This capability allows us to support combat casualty care with unprecedented battlefield survival rates over the last 13 years, to meet the global health threats, as we did in deploying labs and personnel to Liberia that slashed the Ebola diagnosis time from days to hours, and to have our hospital ships, the USNS *Comfort* and the USNS *Mercy*, ready to get underway quickly to support humanitarian assistance and disaster reliefs around the world.

We must also understand that our readiness mission is intricately linked to our work and our personnel day to day in our hospitals and clinics, in our labs, and in our classrooms.

Our patients expect a lot of us, and they should. I am privileged to work so closely with my fellow Surgeon Generals who are equally passionate about continuous improvement and moving the military health system forward as a truly high reliability organization.

PREPARED STATEMENT

These are the transformational times for military medicine, the likes of which I have not seen in my career. There is much work ahead as we navigate important challenges and seize opportunities to keep our sailors and marines healthy, maximize the value for all our patients, and leverage our joint opportunities.

I am encouraged with the progress we are making, but I am not yet satisfied. We will continue to look for ways to improve and remain on the forefront of delivering world class care, any time, anywhere.

Thank you, sir, for your steadfast support, and I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF VICE ADMIRAL MATTHEW L. NATHAN

Chairman Cochran, Vice Chairman Durbin, distinguished Members of the Subcommittee, on behalf of the Navy Medicine team—over 63,000 dedicated men and women serving around the world—I want to thank the Committee for your tremendous support. I am grateful for the opportunity to appear before you today and I can report to you that Navy Medicine is capable, mission-ready and steadfast in our commitment to deliver world-class care, anytime, anywhere.

Strategy: Aligned, Balanced and United

The core mission of Navy Medicine is inextricably linked to that of the United States Navy and the United States Marine Corps. We protect the health of combat-

ready Sailors and Marines in support of global expeditionary missions. Navy Medicine operates underway in all warfare domains and in all environments. This mission requires us to be agile to support the full range of operations and be ready to respond where and when called upon. The Chief of Naval Operations has maintained this imperative through his Sailing Directions: (1) Warfighting First; (2) Operate Forward; and (3) Be ready. These tenets are impactful as we sustain our readiness posture to meet these demanding missions.

Within Navy Medicine, we are staying the course with our 2015 strategic priorities of readiness, value and jointness. Specifically:

Readiness.—We provide agile, adaptable, and scalable capabilities prepared to engage globally across the range of military operations with maritime and other domains in support of the national defense strategy.

Value.—We provide exceptional value to those we serve by ensuring highest quality through best healthcare practices, full and efficient utilization of our services, and lower care costs.

Jointness.—We lead Navy Medicine to jointness and improved interoperability by pursuing the most efficient ways of mission accomplishment.

Individually and collectively, these mutually-supportive focus areas are instrumental in shaping our decisionmaking, internal processes and organizational capacity. We are continuing to drive progress in several key objectives including delivering ready capabilities to the operational commanders and ensuring clinical currency of our medical force. Within the context of providing best value for our beneficiaries, we are sustaining efforts to decrease enrollee cost and increase recapture of private sector purchased care, as well as standardize our clinical, non-clinical and business processes. Navy Medicine continues to leverage joint capabilities to improve interoperability and efficiencies. Our priorities are strengthened because everyone in Navy Medicine has a distinct and important role in contributing to the success of these efforts.

We are advancing joint efforts through the Defense Health Agency (DHA) and its supporting role to the Services' medical departments. Our collective goal is to facilitate greater integration of clinical and business processes across the Military Health System (MHS) through the implementation of shared services. This portfolio of services, all on track to reach full operating capability by October 2015, includes: facilities; medical logistics; health information technology; health plan; pharmacy; contracting; budget and resource management; medical research and development; medical education and training; and, public health. They will be important in building a sustainable business model for the DHA, creating system-wide efficiencies and reducing process variation.

Our collaborative work is evident in response to the comprehensive review of the MHS directed by the Secretary of Defense in May 2014. The 90-day review was directed to assess whether (1) access to medical care in the MHS meets defined access standards; (2) the quality of healthcare in the MHS meets or exceeds defined benchmarks; and (3) the MHS has created a culture of safety with effective processes for ensuring safe and reliable care of beneficiaries. This review applied evidence to what we had previously only been able to presume with regard to quality, safety, and access. We can now assertively conclude Navy Medicine performs comparably to civilian healthcare systems. This rigorous self-assessment demonstrated that we have areas of excellence and areas that could benefit from further improvement. The review afforded us the opportunity to drill down on these opportunities for improvement. In response, we are systemically and aggressively addressing all lagging outliers within Navy Medicine, with demonstrable results already achieved. We are also working with the other Services and the Assistant Secretary of Defense for Health Affairs (ASD(HA)) to transform the MHS into a high reliability organization (HRO) and build a robust performance management system. The review served as an important catalyst to support performance improvement through better analytics, greater clarity in policy, improved transparency, and alignment across training and education programs. I am committed to these transformation efforts and confident that we have a sound and actionable strategy to support our way forward.

Within Navy Medicine, our continuous process improvement (CPI) efforts are leveraging both our Lean Six Sigma (LSS) program and our industrial engineering (IE) capabilities to ensure that efforts are aligned with Navy Medicine strategic priorities. This approach enables us to track the progress of projects, validate results, communicate lessons learned and best practices, as well as improve communication at all levels. In fiscal year 2014, over 100 performance improvement projects were completed throughout Navy Medicine, with approximately the same number currently in progress. Focus areas include standardizing clinical and business practices, improving quality and access, recapturing private sector care, as well as specific initiatives in logistics, pharmacy, laboratory processes and surgical services.

Sound fiscal stewardship of our resources is critical to ensuring we have the capability to provide outstanding care to our beneficiaries. The President's Budget for fiscal year 2016 adequately funds Navy Medicine to meet its medical mission for the Navy and Marine Corps; however, we remain concerned about the uncertainties and associated challenges with any sequestration impacts. The President's Budget also contains important proposals to modernize and simplify TRICARE, along with adjusting cost sharing requirements for some beneficiaries and incentivizing the use of the mail order pharmacy. We support these important proposed changes as necessary to help sustain an equitable healthcare benefit. Navy Medicine appreciates the Committee's strong continuing commitment to our resource requirements and recognizes the significant investments made in support of military medicine.

We are committed to achieving the Department of Defense (DOD) objective of preparing auditable financial statements and reports, including providing substantiating supporting documentation. As a result, audit readiness is a priority for Navy Medicine and we continue to make progress in this important area. We have deployed standard operating procedures supporting key financial business processes and provided thousands of training hours to financial, materiel management and administrative personnel across the enterprise. These efforts strengthen internal controls, improve documentation and help foster continuous business process improvement. In addition, this work helps our decisionmaking capabilities and demonstrates to our stakeholders that Navy Medicine is an accountable steward of the resources we receive.

Mission: Force Health Protection

The foundation of Navy Medicine is force health protection. We protect, promote and restore the health of our Sailors and Marines in all environments, ashore and afloat. This responsibility requires us to be agile, flexible and capable in all aspects of expeditionary medical operations from preventive medicine to combat casualty care to humanitarian assistance and disaster response (HA/DR). As a ready medical force, we must be prepared for any contingency and be capable of operating where it matters and when it matters.

Navy Medicine continues to sustain unparalleled levels of mission success, competency and professionalism while providing world-class trauma care and expeditionary force health protection in support of U.S. and coalition forces in the southern Afghanistan Train Advise and Assist Command-South (TAAC-S) Combined Joint Area of Operations (CJOA). As troop levels decreased more than 75 percent during 2014, the forward deployed NATO Role 3 Multinational Medical Unit (MMU) continued to provide the high-level evaluation, resuscitation, surgical intervention, post-operative care, behavioral health and patient movement services our combatant commanders expect from us. Despite manning reductions from 133 to 87 personnel, the MMU maintains 12 trauma bays, four operating rooms, eight intensive care beds and 12 intermediate care beds.

In 2014, trauma teams at the Role 3 MMU cared for over 1,600 trauma patients and 130 point-of-injury patients that led to 220 admissions and 75 successful operative procedures. The Role 3's patient movement element safely evacuated over 145 patients to higher echelons of care. Navy Medicine's dedication to the warfighter and successful mission accomplishment led to the sustainment of the highest combat injury survival rate in the history of modern warfare, 98 percent. A significant force-multiplier, the Role 3 MMU enabled execution of decisive war-fighting strategies by meeting and exceeding operational and force protection requirements across a highly kinetic battle space.

Navy Medicine has been supporting DOD's interagency efforts in response to the Ebola Virus Disease (EVD) outbreak in West Africa. In September 2014, the Naval Medical Research Command deployed two mobile labs to Liberia in support of U.S. Africa Command (AFRICOM) participation in Operation UNITED ASSISTANCE (OUA). The mobile labs, each manned by Navy Medical Service Corps microbiologists and hospital corpsmen (advanced laboratory technicians), are rapidly deployable detection laboratories that incorporate immunological and molecular analysis techniques. The mobile labs optimize these technologies to rapidly detect infectious pathogens. The labs' detection capabilities effectively reduced the amount of time it takes to determine whether a patient has EVD from several days to a few hours, which greatly reduced the amount of contact that suspect, non-infectious EVD cases have with confirmed infectious cases. We also deployed 23 Navy Medicine personnel in support of the in-theatre Joint Medical Training Teams which are providing important training to host nation healthcare personnel. In addition, 28 Navy Medical Corps and Nurse Corps officers completed specialized Ebola-specific training at Fort Sam Houston as part of the Joint Expeditionary Medical Support Team. The team maintained a continuous response posture in support of the De-

partment of Health and Human Services' (DHHS) mission to provide specialized services for domestic Ebola-related prevention and response. Navy Medicine hospitals and clinics assiduously prepared for potential EVD patients by implementing Centers for Disease Control (CDC) protocols, performing exercises and training in personal protective equipment.

Navy Medicine's investments in Global Health Engagement (GHE), including participation in humanitarian civic action (HCA) missions and multi-lateral exercises, are critical to improving and sustaining medical response capacity and stability, preventing and combating global health risks, and providing force health protection for our personnel. These efforts directly support our capability to respond to world-wide crises and offer unmatched training opportunities to build joint, interagency and international relationships. Naval forces are uniquely positioned to readily meet the challenges of HA/DR missions across the globe. In this regard, we are maturing our strategic partnerships in support of global health security, health threat mitigation, and health stability operations. Building relationships through health promotes our U.S. security interests and supports important theatre security cooperation activities. These efforts also leverage interoperable capabilities with our allies, as well as interagency and non-governmental organizations (NGOs).

Navy Medicine's participation in enduring HCA missions and military-to-military exercises is also important to sustaining the readiness skills of our personnel. In 2014, the hospital ship USNS MERCY (T-AH 19) participated in the 24th Rim of the Pacific (RIMPAC)—a biennial exercise that included 22 nations, 49 ships and submarines, more than 200 aircraft and 25,000 personnel. RIMPAC featured robust military medical engagement, with MERCY participating in exchanges and drills with partner nations, including the People's Republic of China. Plans for Navy's HCA missions in 2015 include Pacific Partnership (PP) and Continuing Promise (CP) which foster relationships with partner and host nations in the Pacific Rim/East Asia and South America/Caribbean, respectively. These missions include both hospital ships with MERCY participating in PP and USNS COMFORT (T-AH-20) supporting CP. These missions will also include medical personnel from the Army and Air Force as well as NGO partners and regional host nations.

In support of the geographic combatant commanders and Navy component commands, Navy Medicine personnel are assigned world-wide supporting GHE activities and global health security, including research and development at our overseas laboratories, public health through Navy Environmental Preventive Medicine Units (NEPMUs). We also have cadre of interagency liaison officers and two health affairs advisors in the Pacific area of responsibility assigned to the embassies in Port Moresby, Papua New Guinea and Hanoi, Vietnam.

Readiness is also directly supported by important health services such as the provision of eyewear. The Naval Ophthalmic Support and Training Activity (NOSTRA), located in Yorktown, Virginia, is DOD's lead agent for all ophthalmic needs. The command coordinates the fabrication of eyewear amongst 26 Navy and Army optical laboratories to produce nearly 1.5 million pairs of spectacles, gas mask inserts, and ballistic eye protection eyewear annually for active duty, reserve component, and qualified beneficiaries. NOSTRA also fabricates eyewear in support of Pacific Partnership, Continuing Promise and other civic action missions. Committed to continuous improvement, this past year NOSTRA reduced its ophthalmic production rework to a 1.2 percent yearly average, which is well below the national average of 6 percent, through implementation of process changes and staff training.

Health: Delivering Patient and Family-Centered Care

We recognize the health of our beneficiaries is the most important outcome and our systems must be aligned to support this priority. It is not supply-driven or volume-based; it is patient-centered, focused on health outcomes and includes all dimensions of health ? body, mind and spirit.

Our Medical Home Port (MHP) program is the foundation to providing integrated and comprehensive primary care. It is a team-based approach offering same day access, preventive services, standardized clinical processes, interactive secure messaging and access to a 24-hour Nurse Advise Line. All Navy MHP practices have undergone rigorous evaluation of clinical and business process standards and achieved recognition by the National Committee for Quality Assurance (NCQA) and the Tri-service Patient-centered Medical Home Advisory Board.

Nearly all of Navy Medicine's 750,000 MTF enrollees are receiving care in a MHP and our metrics show continued improvement. In fiscal year 2014, access to acute and routine appointments improved ten and five percent, respectively, while emergency department utilization decreased by 6 percent from the prior year. We have also seen an increase in the number of beneficiaries utilizing secure electronic messaging to communicate with their providers, with over 290,000 patients sending

more than 30,000 messages per month. These tools enhance provider-patient communication, improve access and help reduce unnecessary clinic visits and expensive use of the emergency department.

We are also expanding important population health management capabilities at several of our MHP sites. The adaptable and scalable framework is derived from a MHS Innovation Award-winning pilot program at Naval Medical Center, San Diego and Naval Hospital Camp Pendleton. This initiative allows for the development of a cohesive and targeted population health strategy that utilizes stratified analyses to determine the type and amount of resources necessary to manage health needs at the local facility. Efforts will focus on all levels of disease prevention in order to improve the health outcomes of our patients. We are also leveraging the unique data analysis capabilities and the health promotion and wellness expertise of the Navy and Marine Corps Public Health Center (NMCPHC) to support each site.

We are ensuring that our Sailors and Marines have access to the benefits of MHP by tailoring programs for the operational forces, including access to integrated behavioral and psychological healthcare providers. We implemented six Marine-Centered Medical Home (MCMH) and three Fleet-Centered Medical Home (FCMH) demonstration sites and planning is underway for an additional 19 sites by the end of 2015. The trends are encouraging with initial data showing Marines not enrolled in MCMH are twice as likely to seek care via the emergency department as compared to those enrolled in a MCMH. Most importantly, we are getting positive feedback from our line and USMC commanders about improved access and readiness for their personnel.

The Navy Comprehensive Pain Management Program (NCPMP) is now integrated within MHP furthering the interdisciplinary approach. This alignment allows us to better focus on prevention, compliance with clinical practice guidelines and improved provider and patient education. In partnership with the University of New Mexico and Army Medicine, we implemented Project ECHO™—a tele-mentoring program connecting pain management specialists with our primary care providers to help manage patients with chronic or acute pain. Complementary and Alternative Medicine (CAM) modalities are also provided at various Navy MTFs such as acupuncture to treat chronic pain, migraine headaches, back and neck pain and a variety of other conditions. In fiscal year 2014, we expanded acupuncture and pain management training opportunities for our clinicians to help broaden the availability within Navy Medicine.

The maturation of our MHP efforts has been complemented by the implementation of the Navy CONUS Hospital Optimization Plan, a comprehensive initiative at nine of our U.S. hospital MTFs. Inpatient bed capacity, workload, staffing and beneficiary population were carefully assessed at each MTF to determine ability to recapture inpatient workload, optimize primary care enrollment and determine specialty services. The plan resulted in the realignment of personnel and services at several of our MTFs which will help sustain the operational readiness skills of our provider teams, improve MHP enrollment capabilities and enhance our private sector care recapture efforts. The plan also focused on the realignment of our family medicine graduate medical education (GME) programs in order to strengthen our training pipeline by maximizing our residents' exposure to required case numbers and complexity of care.

We are grateful for your support of our military construction requirements as we work to provide outstanding facilities for our patients and staff. The new Naval Hospital Guam opened its doors in April 2014 in a location Navy Medicine has served proudly since 1899. The new hospital incorporates advances in healthcare delivery, providing a facility that will improve patient life safety and increase efficiencies in hospital operations, while meeting the full spectrum of medical and surgical care for all eligible beneficiaries. The completed hospital provides 281,000 square feet of modern healthcare spaces, including 42 beds, four operating rooms, two cesarean-section rooms, and improved diagnostic and ancillary capabilities to include magnetic resonance imaging and computed tomography scanning suites. As a vital readiness and quality of life platform for Joint Region Marianas (JRM) and the pivotal Pacific AOR, this military construction project also established a successful model for building regional partnerships. Collaborating with JRM and through the defense reutilization program, medical equipment from the old hospital that was not selected for reuse by DOD generated opportunity and goodwill to benefit other healthcare facilities and partners in that medically underserved region. Our service members, their families, retirees, and veterans are better served by the opening of this state-of-the-art facility.

Navy Medicine is committed to providing quality medical care to our wounded warriors and their families. This is particularly true for the treatment of mental health issues and traumatic brain injury (TBI). While our present conflicts are com-

ing to an end, the need for quality mental health and TBI care will continue and we are poised to provide these services now and in the future. We work closely with Navy Safe Harbor and the USMC Wounded Warrior Regiment to ensure quality care, coordinated care, and smooth transitions of care.

Navy Medicine provides timely, evidence-based mental healthcare for Sailors, Marines and their families across the continuum of care, including resiliency training, outpatient care, and inpatient treatment. Evaluation and treatment services are available ashore and underway, in the United States, and in a variety of locations overseas. The primary objective of all mental healthcare is to help individuals achieve their highest level of functioning while supporting the military mission. We are increasingly focused on ensuring that our care is evidenced-based and supported by quantifiable treatment outcomes. Regular audits conducted by our Psychological Health Advisory Board reflect both the benefits of our mental healthcare and compliance with clinical practice guidelines that exceed the civilian sector particularly for the treatment of post-traumatic stress disorder (PTSD) and depression, which are common issues within the wounded warrior population. We are also encouraged by the promising research conducted by the Naval Health Research Center (NHRC) in alternative therapies such as mindfulness as a stress reduction and resilience building technique.

We continue to embed mental health providers directly within operational units. Embedded mental health providers reduce stigma, increase access to care, and help detect stress injuries early before they lead to decreased mission capability and mental health problems. We are also embedding mental health providers in primary care settings. The Behavioral Health Integration Program (BHIP) in the Medical Home Port will establish over 80 BHIP sites throughout the Navy, Marine Corps, and the fleet. BHIP sites are established at two Marine-Centered Medical Homes, one Fleet-Centered Medical Home and 38 Navy Medical Home Ports.

We must also ensure that our families have access to the support services they need. Since its inception in 2008, the Families Over Coming Under Stress (FOCUS) program has enhanced resilience and decreased stress levels for thousands of active duty service members and their families. FOCUS supports family psychological health and resiliency-building and addresses family functioning in the context of combat deployments, multiple deployments, and high-operational tempo. Through the application of a three tiered approach to care (community education, psycho-education for families and brief-treatment intervention for families), FOCUS has shown statistically significant outcomes in increasing family functioning and reducing negative emotions in both parents and children. To date over 500,000 service members, families, providers and community members have participated in this service at one of our 23 locations worldwide. As part of the transition to a government operated program, we are working to continue these important support services and planning is ongoing to ensure they are appropriately realigned within Navy and Marine Corps family programs.

Navy Medicine remains committed to supporting the psychological health needs of Navy and Marine Corps reservists and their families. The Navy and Marine Corps Reserve Psychological Health Outreach Program (P-HOP) provided over 13,000 outreach contacts to returning service members and provided behavioral health screenings for approximately 12,000 reservists in fiscal year 2014. They also made over 600 visits to reserve units and provided presentations to approximately 63,000 reservists, family members and commands. Over 1,500 service members and their loved ones participated in one of 14 Returning Warrior Workshops (RWWs) conducted last year. RWWs assist demobilized service members and their families in identifying issues that often arise during post-deployment reintegration.

Navy Medicine continues to work with the National Intrepid Center of Excellence (NICoE) to enhance our treatment regimens and increase our understanding of TBI. We currently have one NICoE satellite clinic located at Naval Hospital Camp Lejeune with another planned for Marine Corps Base Camp Pendleton in proximity to the new hospital. The NICoE satellites are designed to provide advanced evaluation and care for service members with acute and persistent clinical symptoms following a TBI. These facilities adhere to a core concept of care (including a standardized staffing and treatment model) that was jointly developed by the Services, as well as the NICoE, the Defense Centers of Excellence for Psychological Health and TBI (DCoE), and the Defense and Veterans Brain Injury Center (DVBIC). Through our NICoE satellites, Naval Hospital Camp Lejeune and Naval Hospital Camp Pendleton will serve as the East and West Coast hubs for the referral and treatment of patients with acute and persistent post-concussive symptoms.

The OASIS program (Overcoming Adversity and Stress Injury Support) provides assessment and treatment for severe combat stress reactions and combat-related PTSD with the goal of returning as many troops as possible to full duty, while

also improving the quality of their lives and relationships. OASIS is a residential program located at Naval Base Point Loma in San Diego that offers a variety of evidence-based therapies, individual case management, recreation therapy, mind body medicine, family involvement, and peer support in a safe, secure, and therapeutic environment. To date, over 300 service members with recalcitrant PTSD have benefited from a broad variety of therapeutic experiences, such as “moral injury” group therapy (an existential group therapy program), meditation, yoga, anger management, sleep retraining, recreation therapy, acupuncture and therapeutic art.

The Navy Case Management team is comprised of over 220 specially trained licensed registered nurses (RNs) and social workers (LCSWs) committed to helping service members and their families understand their medical status and obtain required services throughout the entire care process. In 2014, Navy clinical case managers were assigned to 23 MTFs and provided services to over 23,000 patients, an 11 percent increase from 2013. Clinical case managers work as part of the recovery team along with recovery care coordinators (RCCs), nonmedical case managers (NMCs), and/or Federal recovery coordinators (FRCs). Together these specialists help service members successfully navigate through the military medical system, which can be very complex.

Each and every suicide is a tragedy that has significant impact on families, shipmates and mission readiness. As part of the Department of the Navy’s commitment to suicide prevention, Navy Medicine works closely with our line counterparts to reduce suicide risk by equipping Sailors with training, tools and practices to be psychologically healthy and resilient. Education and prevention initiatives train personnel to recognize stress in themselves and others and apply tools to manage and reduce its negative effects. Suicide prevention requires all of us to be vigilant and strengthen the connections with those around us. We recognize that personnel in the midst of professional or personal transitions may be particularly vulnerable to suicide so we continue to reinforce importance of reaching out to every Sailor, every day.

The Department of the Navy does not tolerate sexual assault and has implemented comprehensive programs that reinforce a culture of prevention, response, and accountability for the safety, dignity, and well-being of Sailors and Marines. Navy Medicine directly supports the Sexual Assault Prevention and Response (SAPR) program by ensuring the availability of sexual assault forensic exams (SAFE) at shore and afloat settings. We are focused on having proficient, confident and caring SAFE providers ready to perform 24/7 in meeting the short and long-term medical needs our victims of sexual assault. SAFE providers—including sexual assault nurse examiners, physicians, physician assistants, advanced practice nurse practitioners and independent duty corpsmen—are trained and available to ensure timely and appropriate medical care for sexual assault victims in all military platforms served by Navy Medicine. We currently have over 875 SAFE-trained providers in our MTFs and serving on operational platforms (surface, air, submarine and expeditionary).

Navy Medicine recognizes the importance of leveraging collaborative relationships with the Army and Air Force, as well as the Department of Veterans Affairs (VA), and other Federal and civilian partners. Our partnerships foster a culture in which the sharing of best practices is fundamental to how we do business. These synergies will help all of us provide better care and seamless services to our beneficiaries and be better positioned to address future healthcare challenges.

We work closely with the VA in assessing opportunities to collaborate cost effectively share services to meet the needs of service members and veterans. There are a full range of unique collaborations, sharing agreements and partnerships that benefit both Departments’ beneficiaries. Our shared goal remains to seek opportunities to partner in local markets in order to measurably and mutually improve the access to healthcare services. We continue to see progress at the Captain James A. Lovell Federal Health Care Center (FHCC), the first demonstration of an integrated DOD/VA facility established in 2010. To ensure our personnel sustain their readiness and combat casualty skills, the FHCC and Stroger Hospital in Chicago initiated a new training partnership that embeds our Navy Medicine personnel in Stroger’s busy trauma and burn units for one to 2-month rotations. The Cook County Trauma Experience (CCTE) allows Navy physicians, nurses and corpsmen to work alongside Cook County trauma surgeons and gain valuable trauma care experience. An important focus area remains ensuring efficient health information technology to support providers’ ability to deliver healthcare to both VA and DOD beneficiaries in the FHCC integrated environment. As statutorily required, a thorough evaluation of the FHCC, led by DOD and the VA, is currently underway to objectively assess the demonstration and consider options for both Departments moving forward.

We, along with the Army, Air Force and DHA, are working with DOD in support of the Defense Healthcare Management Systems Modernization (DHMSM) efforts to acquire and configure a new electronic health record (EHR). This EHR will be used in our MTFs, onboard naval vessels and in the field with the Marines forces. It is also fundamental to supporting our interoperability with the VA and private sector providers. Two Navy MTFs, Naval Hospital Bremerton and Naval Hospital Oak Harbor, are expected to be part of initial operating capability (IOC) deployment.

Mission-Ready: The Navy Medicine Team

The Navy Medicine team, officers, enlisted personnel, government civilians and contractors, serves around the world delivering outstanding care and support services to Sailors, Marines, their families and all those entrusted to our care. This diverse and inclusive workforce is guided by the Navy Core Values of honor, courage and commitment. I am inspired by their contributions to ensuring that Navy Medicine, and those we serve, are mission-ready.

Active component (AC) and reserve component (RC) health professions recruiting and retention remains a priority and we are grateful for the Committee's support of important special pay and incentive programs. In fiscal year 2014, Navy Recruiting was successful in attaining 100 percent of the AC Medical Department officer goal and, due to high retention rates, overall officer manning reached 100 percent, a 10-year high. Some specialty shortages exist mainly due to billet growth and primarily in mental health specialties; however, we continue to see progress in psychiatry, clinical psychology and social work, with manning levels at 92 percent, 90 percent and 93 percent, respectively. We recognized the increasing demand for mental health services and have worked to recruit, train and retain personnel in these specialties.

Overall RC Medical Department officer manning is 95 percent; however, there are significant shortages in Medical Corps manning at 75 percent and shortfalls continue in orthopedic surgery, general surgery and anesthesiology. In fiscal year 2014, RC Medical Corps recruiting attained 67 percent of the accession goal relying heavily on the direct commission officer market. RC shortages are being addressed by continuing to offer targeted special pay and initiating retention bonuses, loan repayment plans and monthly stipends for healthcare professionals pursuing a critical subspecialty.

Both AC and RC Hospital Corps enlisted recruiting was successful in fiscal year 2014 with both attaining 100 percent of goals. While overall manning is healthy in both components, challenges exist within the Fleet Marine Force Reconnaissance Corpsman specialty due to billet growth and a complex production pipeline.

Navy Medicine's Federal civilian workforce provides stability and continuity within our system, particularly as their uniformed colleagues deploy, change duty stations or transition from the military. Throughout our system, they provide patient care and deliver important services in our MTFs, research commands, and support activities as well as serve as experienced educators and mentors, particularly for our junior military personnel. As of January 2015, our civilian end strength was 11,510, which is in line with our overall requirements, and we continue to emphasize the importance of attracting and retaining talented civilian personnel within Navy Medicine.

Navy Medicine's Reintegrate, Educate and Advance Combatants in Healthcare (REACH) Program is an important initiative that provides recovering service members mentors in our MTFs who provide them with hands-on training and learning experiences in healthcare. Additionally, recovering service members are connected with career coaches who offer career and educational guidance for a number of medical disciplines. The program also strengthens our personnel's continued care and support when they see the patients they have cared for and mentored become one of their colleagues. This positive feedback allows the REACH Program to continue to expand. This year, Naval Hospital Jacksonville joined Naval Medical Center Portsmouth, Naval Medical Center San Diego, Naval Hospital Camp Lejeune, Naval Hospital Camp Pendleton, Walter Reed National Military Medical Center and Naval Health Clinic Annapolis as MTFs that participate in the REACH program. Last year, over 200 wounded warriors have accessed services at our REACH sites. Since the inception of the program in March 2011, 58 students have transitioned to healthcare careers in Navy Medicine, other Federal agencies or in the private sector.

Education and Training: Sustaining Excellence

Investments in education and training are critical for meeting our current requirements and preparing for future challenges. We support the continuum of medical education, training and qualifications that enable health services and force

health protection. Our Naval Medical Education and Training Command (NMETC) is continuing to apply innovative, cost-effective learning solutions to fully leverage technology, partnerships and joint initiatives. These collaborative efforts were important as the DHA reached initial operating capability for medical education and training shared services. During calendar year 2014, 3,609 Sailors completed METC Basic Medical Technician Corpsmen Program at the joint Medical Education and Training Campus (METC) and earned the rating of hospital corpsman. They trained alongside Soldiers and Airmen in an outstanding academic environment. In addition, 2,249 hospital corpsmen trained in advanced technician programs at METC.

Navy's Medical Modeling and Simulation Training Program Management Office is co-located with the Air Force Medical Modeling and Simulation Training Office at Randolph Air Force Base, Texas. They are collaborating to address common approaches to simulation utilization to support training for care of combat injuries as well as training for high-risk populations such as the complicated obstetric and neonatal cohort. Shared projects included identification of best airway trainer and identifying standardized training adjuncts to support trauma combat care courses for all three Services.

Our Surface Warfare Medicine Institute (SWMI) expanded its training for the Surface Force and Dive Independent Duty Corpsman (IDC) with two new state-of-the-art virtual reality medical simulation rooms and expanded access to training at the Bio-Skills Center at the Naval Medical Center, San Diego. This training is critical as we prepare high-performing hospital corpsmen for challenging assignments in the fleet and with the Marine Corps.

Graduate medical education (GME) is critical to the Navy's ability to train board-certified physicians and meet the ongoing requirement to maintain a tactically proficient, combat-credible medical force. Robust GME programs continue to be the hallmark of Navy Medicine. Despite the challenges presented by fiscal constraints, pressures due shifting priorities and new accreditation requirements, GME remains resilient and focused on the mission, with particular emphasis on readiness, value and jointness.

Our institutions and training programs continue to demonstrate outstanding performance under the Next Accreditation System of the Accreditation Council for Graduate Medical Education (ACGME). All Navy GME programs have now transitioned to the Next Accreditation System (NAS) and the three major teaching hospitals all successfully underwent Clinical Learning Environment Review (CLER) visits this year.

Strategic efforts to improve recruiting into undermanned specialty training programs over the past several years have been successful. We have had enough qualified applicants for previously challenging specialties such as neurology, neurosurgery, urology and radiation oncology to restore and maintain the required pipeline. Specialties that are still working to attract sufficient qualified applicants are at the top of our priority list and include general surgery, family medicine and aerospace medicine.

In addition, this year family medicine training sites and billets were realigned consistent with our CONUS Hospital Optimization Plan. Navy GME restructured from six sites four and redistributed the inservice training billets among the remaining sites, reserving five outservice training billets per year for both PGY-1 and PGY-2 training as needed to maintain the pipeline during the transition.

Board certification is a universally recognized hallmark of strong GME. The 5 year average first time board certification pass rate for Navy trainees is 93 percent. Our board pass rates meet or exceed the national average in virtually all primary specialties and fellowships. Our Navy-trained physicians continue to demonstrate they are 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.

Research and Development: Driving Innovation

For over 75 years, Navy Medicine has conducted a global research and development (R&D) program that is currently executed through the Naval Medical Research Center (NMRC), its subordinate labs, numerous joint service initiatives and a well-established cooperative infrastructure of universities, industry, and other government agencies. The mission is focused on biomedical research supporting our operational forces and service members. These priorities include: traumatic brain injury and psychological health; medical systems support for maritime and expeditionary operations; wound management throughout the continuum of care; hearing restoration and protection; and undersea medicine.

NMRC and the seven subordinate laboratories (Naval Health Research Center, San Diego; Naval Medical Research Unit-SA, San Antonio; Naval Medical Research

Unit-D, Dayton; Naval Submarine Medical Research Laboratory, Groton; Naval Medical Research Unit Two, Singapore; Naval Medical Research Unit Three, Cairo, and Naval Medical Research Unit Six, Lima) collectively form the NMR&D Enterprise that is the Navy's and Marine Corps' premier biomedical research, surveillance/response, and public health capacity building organization. Over 1,600 dedicated professional, technical, and support personnel are focused on force health protection and enhancing deployment readiness of DOD personnel world-wide. Earlier this year, I visited our Naval Medical Research Unit Three in Cairo, the oldest overseas military medical research facility and one of the largest research laboratories in the North Africa-Middle East region. I had an opportunity to see firsthand the outstanding research being conducted and the importance of our enduring partnerships in this important region.

Ongoing research and development ensures service members' health is better protected, operational tempo is more effectively performed, and the rehabilitation of the ill and injured is continuously improved. In addition, NMR&D is an active participant in global health security efforts and focuses on mitigating the spread of antimicrobial resistance, emerging and reemerging infectious diseases, including EVD, malaria, and Middle East Respiratory Syndrome caused by a Coronavirus (MERS CoV). NMR&D Enterprise labs work with partners around the world to enhance detection and bio-surveillance capabilities, to improve reporting systems and to build host-country response capacity. In collaboration with the Walter Reed Army Institute of Research (WRAIR), our experts are engaged in military malaria research, including the development of candidate malaria vaccines.

Active collaboration with industry is important given the dual-use nature inherent in military medicine research. In 2014, Navy Medicine executed almost 100 new public-private Cooperative Research and Development Agreements (CRADA) partnerships leveraging internal and external capabilities and resources toward accelerating the development of new biotechnologies.

Navy Medicine professional training activities continue to satisfy all requirements that exist for accreditation of post-graduate healthcare training programs in which new medical, dental, nursing and allied health professionals gain advanced skills. An important component that supports the accreditation of our post-graduate healthcare training programs is through trainee participation in the Clinical Investigation Programs (CIPs) based at our teaching MTFs. The conduct and findings from these investigations, in addition to satisfying training requirements, also support the need to develop new knowledge and advanced interventions to better treat service members with combat injuries, to prevent training injuries, and to provide better medical care to our healthcare beneficiaries. With \$3.6 million funded by Navy Medicine in fiscal year 2014 and an additional \$4 million in external grants received for clinical research, our teaching MTFs conducted a total of 612 clinical research projects which resulted in 296 scientific publications and 701 scientific presentations. These clinical research projects directly improve the delivery of quality medical care at the MTF sites. The findings of the clinical research projects were published in high-impact, peer-reviewed medical and scientific journals and were presented at both national and international scientific meetings.

Way Forward

Our center of gravity is readiness. We continue to ensure that our Sailors and Marines are medically ready to successfully execute their demanding missions, whether deployed or ashore. Our operating forces are supported by a highly trained, innovative and cohesive Navy Medicine team whose primary focus is taking care of them, their families and others entrusted to our care. This mission—our obligation—is what makes us unique. We continue to make steady progress; however, all of us recognize the formidable work ahead during this unprecedented period of transformation in healthcare. I am confident Navy Medicine will meet these challenges with commitment, skill and professionalism.

Senator COCHRAN. Thank you very much, Admiral. We now will hear from Lieutenant General Thomas Travis.

STATEMENT OF LIEUTENANT GENERAL THOMAS TRAVIS, SURGEON GENERAL, UNITED STATES AIR FORCE

General TRAVIS. Good morning, sir. Thank you, Chairman Cochran, Ranking Member Durbin, distinguished members of the subcommittee. Thanks for inviting us to appear before you today.

Since 9/11, the Air Force has accomplished over 200,000 patient movements in our AIRVAC system, including 12,000 critical care patients.

The historical survival rate for U.S. casualties in the past 13 years once they entered the Theater Medical System is a reflection not just of Air Force but our combined commitment to the highest quality of care for our patients.

Critical care transport teams were developed by the Air Force in the late 1990s, and have now become the international benchmark for safe ICU (intensive care unit) level patient movement, and we are sharing this knowledge with other nations so they can partner with us.

It has changed the way we operate in the deployed environment and in fact, really has changed for medicine. We have adapted that capability now to meet the Joint Staff requirements for intra-theater and route tactical critical care of fresh or postoperative ICU level casualties with our Army partners via rotary and tactical aircraft, many from point of injury in the past few years.

Our medical response teams include rapidly deployable modular, scalable field hospitals that provide immediate care within minutes of arrival, the expeditious medical support health response teams, which are an evolution of our combat proven EMEDS (expeditionary medical support systems) teams, are now being deployed across our Air Force. They provide immediate emergency care within minutes of arrival, surgery and intensive care within 6 hours, and full ICU capability within 12 hours.

Because of our experience with EMEDS and our rapid ability to respond, once approved, in support of Operation United Assistance in Liberia, an Air Force medical team quickly deployed and set up the first healthcare worker Ebola disease treatment center utilized by the U.S. Public Health Service.

Our medical forces must stay ready through their roles in patient-centered full tempo healthcare services that ensure competence, currency, satisfaction of practice, while fostering innovation.

We cannot separate care at home from readiness because what we do and how we practice at home every day translates into the care that we provide when we deploy.

In addition, for well over a decade, we have had a cadre of our best physicians, nurses, and technicians embedded in world class Centers for Sustainment of Trauma and Readiness Skills or C-STAR facilities, such as the University of Maryland's Baltimore Shock Trauma, University of Cincinnati, and St. Louis University, in order to train trauma and critical care transport teams before they deploy, and it has worked.

We are now committed to expanding training opportunities for non-surgical and non-trauma related skills to ensure all of our personnel remain ready and current, providing hands-on patient care of greater volume and complexity than we normally see in our facilities. The VA assists us with this as well.

We recently held a course at Nellis Air Force Base in Nevada in cooperation with the University Medical Center, Las Vegas, to help us expand these training opportunities, and we have a dozen more courses this year.

This will further expand the system we have in place to identify training requirements and track completion of training events down to the individual and team level.

In the Air Force I grew up in, the operators were primarily pilots and navigators. There are now many more types of operators as air power is projected through the various domains, aerospace and cyberspace, and in very new ways.

Air Force Medicine is also adapting and innovating to better support the airmen who safeguard this country 24/7, 365 days a year. In that regard, Air Force Medicine is now focusing more on human performance. Our AFMS (Air Force Medical System) strategy embraces this, and to focus on this as a priority, we recently revised our vision to state that our supported population is the healthiest and highest performing segment of the U.S. by 2025.

This vision is focused on health rather than healthcare, and is connected to the imperative to assure optimum performance of airmen. We have begun now either embedding or dedicating medics to direct support missions such as special operations, remotely piloted aircraft, intel, or other high stress career fields, and these embedded medics have clearly had a positive impact on those airmen, their mission effectiveness, and their families.

Patient safety and quality care are foundations supporting our beneficiaries in their quest for better health and improved performance, and in order to improve both safety and quality, we are committed, as my partners have stated, to become a highly reliable healthcare system adopting safety culture and practices similar to other highly reliable sectors, such as aviation.

This is a journey being undertaken by healthcare systems across the country. The AFMS joins with our Army and Navy partners as we transform into a fully integrated system that consistently delivers quality healthcare wherever we are, while improving the health and readiness of our forces.

PREPARED STATEMENT

With our vision of health and performance in mind, we are committed to providing the most effective prevention and best possible care to a rapidly changing Air Force, both at home and deployed.

I am confident that we are on course to ensure medically fit forces, provide the best expeditious medics on the planet, and improve the health of all we serve to meet our nation's needs.

Thanks to the committee for your continued strong support of Air Force Medicine and the military health system, and the opportunity to provide further information to you this morning.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL THOMAS TRAVIS

Chairman Cochran, Ranking Member Durbin, and distinguished members of the Subcommittee, thank you for inviting me to appear before you today. After more than 13 years of war, in which the Military Health System (MHS) attained the lowest died-of-wounds rate and the lowest disease/non-battle injury rate in history, the Air Force Medical Service (AFMS) is envisioning future conflicts and adjusting our concepts of operations to prepare to provide medical support in situations that could be very different than what we have faced in the current long war. Among many efforts, we are focusing on enroute care to include aeromedical and critical care evacuation, expeditionary medical operations, and support to personnel during combat operations. Future contingencies may require longer transport times of more

acute casualties without the benefit of stabilization in fixed facilities, as we have had in Iraq and Afghanistan. We have to consider worst case scenarios, which will prepare us well for less challenging circumstances. By enhancing clinical skills through partnerships with busy, high acuity civilian medical centers (such as our training programs in Baltimore, Cincinnati, St. Louis, and, most recently, Las Vegas), regular sustainment training for all team personnel, and developing new medical capabilities, we are committed to being just as ready or more ready at the beginning of the next war as we are in the current war. Our Nation expects no less—and our warriors deserve no less.

Since 9/11, we have logged over 200,500 patient movements, including 12,000 critical care patients. The 96 percent survival rate for U.S. casualties once they enter the Theater Medical System is a reflection of our commitment to the highest quality of care for our patients. As part of a remarkable Joint expeditionary healthcare system, deployed care has dramatically evolved during the wars and produced advances in scientific knowledge now in use across the U.S. to improve trauma outcomes.

Critical Care Air Transport Teams (CCATT) were developed in the late 1990s and have become the international benchmark for safe ICU-level patient movement. The AFMS adapted that capability to create the Tactical Critical Care Evacuation Team (TCCET), which consists of teams of medical personnel and equipment with specialized skills and training to meet Joint Staff requirements for intra-theater enroute tactical critical care transport of fresh and post-operative ICU-level casualties via rotary-wing or other tactical aircraft. Additionally, we recently developed a capability called Enhanced TCCET (TCCET-E), which is capable of short notice deployments performing surgical stabilization using interior of aircraft if required and supporting long-range patient movement. We have teams poised and ready to launch on C-130s or C-17s in the USEUCOM/USAFRICOM AOR today.

Our health response teams now include rapidly deployable, modular, and scalable field hospitals that provide immediate care within minutes of arrival. The Expeditionary Medical Support Health Response Teams (EMEDS-HRT), an evolution of our combat-proven and scalable Expeditionary Medical Support (EMEDS) teams, are now being deployed across our Air Force. They provide immediate emergency care within minutes of arrival, surgery and intensive critical care units within six hours, and full ICU capability within 12 hours of arrival. The HRT also helps tailor clinical care to the mission, adding specialty care such as OB-GYN and pediatrics for humanitarian assistance or disaster relief missions. This evolved expeditionary HRT capability has been successfully deployed and is on track to replace our previous generation of EMEDS by 2016.

In support of OPERATION UNITED ASSISTANCE in Liberia, an Air Force medical team quickly deployed and set up the first healthcare worker Ebola Virus Disease (EVD) treatment center utilized by the U.S. Public Health Service. The Air Force also provided 24 medical personnel to the Healthcare Worker Training Program, training over 1,500 healthcare workers in the proper procedures in dealing with Ebola infected patients. In support of Health and Human Services within the continental United States, the AFMS provided 12 personnel for USNORTHCOM's rapid response team that could respond to any city within the U.S. Additionally, the Air Force and USTRANSCOM developed the first Transportable Isolation System (TIS) to provide a capability to transport multiple contagious patients while mitigating/minimizing the risk of exposure to the aircraft and aircrew. While thankfully not needed in the recent EVD response, this is a capability which could prove useful in future infectious disease contingencies around the globe or here at home.

Our medical forces must stay ready through their roles in patient-centered, full-tempo healthcare services that ensure competence, currency, and satisfaction of practice and foster innovation. In support of the MHS Quadruple Aim of Readiness, Better Health, Better Care, and Best Value; the AFMS is incorporating best practices such as Patient-Centered Medical Home (PCMH) and advanced surgical technology and techniques to ensure our staffs have the needed tools to care for patients at home or deployed. We can't separate care at home from readiness, as what we do and how we practice at home translates into the care we provide when we deploy. We have to augment our experience and training to be truly ready, as there is undoubtedly a difference between being prepared for downrange combat casualties and the type of every day medical care provided at in-garrison medical treatment facilities (MTF). We have a mature, combat-proven system for augmenting the clinical experience of our teams.

For well over a decade we have had a cadre of our best physicians, nurses, and technicians embedded in world-class Center for Sustainment of Trauma and Readiness Skills (C-STARS) facilities such as the University of Maryland's Baltimore Shock Trauma, University of Cincinnati, and St. Louis University. Hundreds of our medics have had elite trauma and critical care training through these facilities and

remain prepared to deploy anywhere needed; whether to the AF-led theater hospitals in the USCENTCOM AOR, as CCATT team members, or to whatever location U.S. forces are deployed. We remain committed to the relationship we have with these civilian facilities, and rather than reducing training platforms as we come home from the current war, we intend to expand training opportunities to keep skills current and our team ready.

We are committed to expanding training opportunities for non-surgical and trauma related skills to ensure all our personnel remain ready and current. The AFMS continues its transition to a tiered, centrally managed training platform called Sustained Medical and Readiness Training, or SMART, which provides hands-on patient care of greater volume and complexity. Our first SMART course began recently at Nellis AFB, Nevada, in cooperation with the University Medical Center in Las Vegas, with plans for more than a dozen additional classes with students from all over the Air Force in the next year.

As SMART requirements expand and the program matures, other local and regional partnerships will be developed to meet AFMS training needs, and we will establish a training “battle-rhythm” to provide deployable Airmen hands-on, high acuity care opportunities on a regular basis. This will further expand the system we have in place to identify training requirements and track completion of training events down to the individual.

Collaboration with the Department of Veterans Affairs (VA) through sharing agreements and joint initiatives enhances our providers’ clinical currency, saves Federal dollars, and maintains readiness. As a result of our efforts to encourage participation in the DOD-VA Resource Sharing Program, we now have 49 Air Force-VA sharing agreements with 10 Master Sharing Agreements covering all available clinical services at nine MTFs. Our relationship with the VA extends to clinical currency opportunities for both entities. Our relationship with the VA extends to clinical currency opportunities for both entities.

One recently developed venture of this nature is with the Buckeye Federal Healthcare Consortium in Ohio. This consortium promotes healthcare resource sharing between Wright-Patterson AFB Medical Center and VA medical facilities in Dayton, Columbus, and Cincinnati, serving 158,137 enrolled veterans. A sharing agreement with Veterans Integrated Service Network 10, which supports veterans in three States, is currently being reviewed. Air Force-VA sharing agreements enhance access to specialty care for VA patients, allow VA physicians to use the MTF’s operating suites, and provide a great venue for our Air Force medics to hone their readiness skills in a high-acuity environment.

The United States Air Force’s core missions are Air and Space Superiority, ISR (Intelligence, Surveillance, and Reconnaissance), Rapid Global Mobility, Global Strike, and Command and Control. These are almost identical (but in different terms) to the missions the USAF had in 1947. But we now do these missions in three domains: air, space, and cyberspace. In the Air Force I grew up in, the “operators” were primarily pilots and navigators. There are many more types of “operators” these days, as Air Power is projected through the various domains in very new ways. Air Force Medicine is adapting and innovating to better support the Airmen who safeguard this country 24/7, 365 days a year. In that regard, Air Force Medicine is now focusing on human performance. This is not a huge shift for us. Since the AFMS began in 1949, Air Force medics have focused on occupational and population health and prevention. We are simply taking it to the next level. Our AFMS strategy embraces this, and to focus on this as a priority, we recently changed the AFMS vision to state: “Our Supported Population is the Healthiest and Highest Performing Segment of the U.S. by 2025.” This goal is focused on health rather than healthcare, and is clearly connected to the imperative to assure optimum performance of Airmen. Every Airman (or other-Service member) has human performance demands placed on them by virtue of their operational and mission tasks—and these demands have changed, rather than decreased, due to the technologies employed in current mission environments. This strategy will help to change culture, ultimately enabling our Airmen to not only strive to prevent or ameliorate disease, but to promote performance.

In view of our evolving Air Force, the AFMS is evolving to ensure that as many of our supported Service members are available to their commander as possible, able to perform the exquisite set of skills that are now required of them. Health in the context of mission equates to performance, and every medic or healthcare team must know how the mission might affect the health of the individual or unit, and how medical support affects the mission. I think this is just as relevant for other beneficiaries, to include family members and retirees, who also have performance goals in their day-to-day activities. Toward that goal, we have begun either embedding or dedicating medics to directly support missions such as special operations,

remotely piloted aircraft, intel, and explosive ordnance disposal (EOD), which have had a clearly positive impact on those Airmen, their mission effectiveness, and their families. We are moving rapidly to make this “mission specific” support a more wide-spread practice.

At the clinic level, our intent is to provide customized prevention, access, and care for patients, recognizing specific stresses associated with career specialties. Our goal is to prevent physical or mental injuries where possible, and if unable to prevent, provide rapid access to the right team for care and recovery to full performance. As a result, mission effectiveness and quality of life should improve, and long-term injuries or illnesses should be mitigated to provide for a healthier, more active life, long after separation or retirement. Concordantly, long-term healthcare costs and disability compensation should also decrease.

Patient safety and quality care are foundational to supporting our beneficiaries in their quest for better health and improved performance. In order to improve both safety and quality we are committed, as part of the MHS, to become a high reliability healthcare system. This is a journey being undertaken by healthcare systems across the country. To achieve this goal we need a focused commitment by our leadership and staff, instilling a culture of safety and quality, constant measurement of the care we provide combined with robust process improvement at all levels. These key tenets will enable the AFMS to achieve the principles of high reliability seen in aviation and nuclear communities, and are aimed at eliminating medical errors. To that end, we are committed to strengthening our performance improvement programs and training all medics as “process improvers.” This will require advanced training for key leaders and staff, driving process improvement activities from the executive suite down to the front lines of our clinics and wards. A culture of safety requires that all AFMS members are empowered and understand their responsibility to report any unsafe condition or error, with the intent to make improvements and raise awareness across the enterprise.

In support of Human Performance and Enroute Care initiatives, our C-STARs faculty and civilian partners are comparing aeromedical evacuation timing and combat casualty outcomes to help medical teams determine ideal timing of evacuation to optimize treatment successes. While we have been very proud of our accomplishments in quickly transporting patients to higher levels of care, the decision of when to move a patient must be data-driven, and our experience in the current long war should help guide such future decisions, and may have great relevance in anti-access/area denial scenarios in future wars.

We also focus research on better care and health for Air Force families. Over the last few years we have teamed up the Wright-Patterson AFB Medical Center with the Nationwide Children’s Hospital and Dayton Children’s Hospital in Ohio to identify autism spectrum disorder susceptibility genes, rare variants, and interventions to enable early intervention and treatment. This endeavor continues to support development of the Central Ohio Registry for Autism, which will enroll 150 families in the next phase of patient studies through September 2015, 50 percent of which are military families. Early intensive behavioral intervention with Applied Behavior Analysis (ABA) therapy offers promise. According to research, up to 20 percent of children diagnosed with autism before age 5 who receive ABA therapy “recover” from the condition. There are many Air Force families who could potentially benefit from this type of treatment, and we will continue this important collaborative effort.

With more than one million patients enrolled, Patient-Centered Home (PCMH) has made significant progress toward greater continuity of care and improved patient and provider satisfaction. Over the last year, patients have seen their assigned provider team 92 percent of the time, our highest continuity rating thus far. PCMH has increased primary care manager same day access, reduced local emergency room utilization, decreased the need for specialty care referrals, and improved patient experiences resulting in a remarkable healthcare satisfaction rating over 95 percent.

In concert with PCMH is our ongoing secure messaging capability called MiCare. The Air Force has now implemented MiCare at all 75 of its MTFs worldwide and averages over 220,000 messages per month. As of December 2014, there are over 412,000 Air Force registered users, allowing patients and providers to communicate on a secure network regarding non-urgent healthcare concerns. The network also allows our patients to view their healthcare record, make appointments, renew prescriptions, and receive important preventive care messages from their PCMH team. A recent secure messaging satisfaction survey demonstrated that 97 percent of over 13,000 survey respondents were satisfied with their secure messaging transaction and more than 86 percent agreed it helped them avoid a trip to an emergency room or an MTF for a medical problem.

Another important initiative concerning in-garrison care is our continued support of a robust Tele-Health program. Project ECHO (Extension for Community Health

Outcomes) has evolved to cover eight long-term healthcare concerns and services to include complicated diabetic management, chronic pain management, traumatic brain injury, behavioral health, acupuncture, addiction, neurology, and dental disease. This Tri-Service effort builds specialty care capacity into a primary care clinic and participating ECHO providers comment on their increased clinical knowledge and confidence in patient management of these complicated diseases. Providers report an overall 95 percent approval rating in the ECHO's value to their practice. ECHO fits seamlessly into the PCMH model of healthcare delivery. During 2014, ECHO saw technological improvement by moving from the traditional VTC suite to the providers' desktop web-based video platform. In effect, we are using "new" technology to bring back the "old fashioned" curbside consult. Based on the University of New Mexico model, when fully matured, ECHO is projected to reduce referrals to the TRICARE network across 21 specialties over a 7-year expansion plan. This has the potential to enhance team-based care for chronic disease by incorporating the specialist into the team via digital connections.

The AFMS currently has two major health promotions initiatives. First, we're rolling out our "Healthcare to Health" program at six installations to better address adult and childhood obesity through proven patient and parent-focused interventions. Secondly, we're implementing a nutrition therapy Tele-Wellness at 15 smaller MTFs. This will allow those stationed at smaller locations access to one of our 31 dietitians stationed around the globe. We're also developing our Group Lifestyle Balance (GLB) and 5210 Healthy Military Children programs. GLB addresses the fastest growing problem facing our population today, pre-diabetes. It is geared towards helping participants lose five to 7 percent of their body weight and increasing their physical activity level. The 5210 Healthy Military Children program is a primary prevention approach to childhood obesity with consistent messaging about healthy habits.

The wellness and resilience of our deploying Airmen remains a top AFMS priority. We have a new and improved Pre-Deployment Mental Health Training module designed to enhance an Airman's understanding of combat related stresses and how to mitigate the risk factors. The training has four platforms tailored to different target audiences—leaders, medical and mental health providers, chaplains, and all other Airmen. Our redeploying Service members whose deployed role poses an increased risk for posttraumatic stress have been attending a 2-day program at our Deployment Transition Center at Ramstein Air Base, Germany. Research demonstrates this initiative has reduced reported Post-Traumatic Stress (PTS), interpersonal conflict, and problematic alcohol use in our returning Service members. Each Airman is screened for PTS several times per deployment. When signs of PTS are detected, evidence-based treatments are provided in our MTFs. PTS rates continue to be low across the Air Force due in part to these combined efforts.

Airmen account for 14 percent of Service member traumatic brain injuries (TBI), only 2 percent of these cases are deployment related and 86 percent of those are mild concussion injuries. Though the incidence of TBI is low in the Air Force, we remain committed to providing quality care for our Airmen who have sustained these injuries. Our Air Force TBI clinic at Joint Base Elmendorf-Richardson maintains cross-Service support to optimize care within the DOD. For our more difficult cases we partner with the National Intrepid Center of Excellence for Psychological Health and TBI and Intrepid Spirit Satellites.

Air Force suicide rates remain lower than the U.S. and DOD average, but suicide awareness and prevention is a major concern for all Air Force leaders. Identified suicide risk factors continue to be relationship issues, financial problems, and legal problems. Our most "at risk" career fields continue to be security forces, aircraft maintenance, and intelligence. This year's suicide prevention efforts will transition from computer-based training to a more personalized, face-to-face delivery method. Supervisors and other mentor-leaders will facilitate small group discussions allowing more direct participation by Airmen. This will leverage our "Wingman culture" which is key to identifying and assisting Airmen. We are also adding an annual Frontline Supervisor Training refresher for our at-risk career field leaders to ensure their mentoring and awareness skills remain honed. Timely intervention utilizing counseling techniques learned during these training just may prevent future tragedies. Counseling services are available to our Airman and their families from chaplains, Military Family Life Consultants at the Airman and Family Readiness Centers, mental health providers working in primary care settings, and of course, evaluation and therapy delivered in our mental health clinics. Suicide prevention in the Air Force relies on leaders and communities working together to bolster Airmen resilience and create a supportive environment where seeking help early is seen as a strength. We know what we do prevents some suicides, but we are not satisfied and will continue to focus hard on this issue.

We remain vigilant in our efforts to prevent hearing loss among Service members exposed to high intensity occupational noise. Often these exposures result in auditory and balance injuries, to include tinnitus (ringing in the ears) and hearing loss, currently the clear number one and two VA reimbursable health concerns. The DOD Hearing Center of Excellence (HCE) is a Tri-Service/VA collaboration with the Air Force serving as the lead agent. The HCE aim is to improve the auditory health of beneficiaries.

This year the HCE will implement the DOD Comprehensive Hearing Health Program designed to prevent and ultimately eliminate noise-induced hearing loss. A lofty but possible goal with outreach and awareness is essential to making this work. Identification of hazardous noise sources, effective and consistent hearing conservation methods, as well as monitoring hearing and proper hearing protection use are all education topics important to the HCE. This year also marks the beginning of the Baseline Audiogram (hearing test) at Accession Program for all Air Force members. This initiative ensures Airmen have a documented hearing screening prior to initial noise exposure, allows comparison of hearing ability over the course of a military career, provides better tracking ability of hearing loss trends throughout our Air Force, and when necessary, provides the capability to remove Airmen from hazardous noise exposure.

In 2015, the HCE will continue to develop the Joint Hearing Loss and Auditory System Injury Registry, a comprehensive effort to identify and track the incidence and care of auditory and balance system injury, facilitate research, develop best practices, and better educate Service members and veterans. The registry will improve the quality, reliability, and continuity of healthcare for Service members while they're on active duty and once they've transitioned to the VA. In addition to registry efforts, the HCE is focused on allowing Active Duty hearing conservation documentation to be shared with the VA to allow a smooth transition and continuity of care across the two departments.

Looking ahead, the AFMS is committed to working with our sister Services in continuing to shape the Defense Health Agency (DHA). We are optimistic that our efforts will result in efficiencies and cost savings across the MHS, as well as provide common solution sets to enhance interoperability at home and in a deployed setting. The ten shared services, such as IT and logistics, will standardize processes and reduce duplication across the MHS. Another example of our integration across the medical Services is our focus on enhanced multi-Service markets, or eMSMs, where we have large beneficiary populations and can target operational and business efficiencies, such as in the National Capital Region, Tidewater Virginia, San Antonio, Colorado Springs, Puget Sound, and Hawaii markets.

The AFMS joins with our sister Services as we transform, as part of the MHS, into a fully integrated system that consistently delivers quality healthcare while improving the health and readiness of our forces. With our vision of health and performance in mind, we are committed to providing the most effective prevention and best possible care to a rapidly changing Air Force, both at home and deployed. I am confident that we are on course to ensure medically fit forces, provide the best expeditionary medics on the planet, and improve the health of all we serve to meet our Nation's needs. I thank the Subcommittee for its continued strong support of Air Force medicine and the opportunity to testify at this hearing.

Senator COCHRAN. Thank you. Our other witness this morning in this panel is the Program Executive Officer of the Defense Health Management Systems, Mr. Chris Miller. Welcome, Mr. Miller. You may proceed with your statement.

STATEMENT OF CHRISTOPHER MILLER, PROGRAM EXECUTIVE OFFICER, DEFENSE HEALTH MANAGEMENT SYSTEMS

Mr. MILLER. Thank you, sir. Chairman Cochran, Ranking Member Durbin, distinguished members of the subcommittee, thank you for the opportunity to address the Subcommittee on Defense Appropriations.

I am honored to represent the Department of Defense as the Secretary's Program Executive Officer responsible for the Department's efforts to modernize our electronic health records (EHRs) and to make them interoperable with those of the Department of Veterans Affairs and our private sector providers.

I also have the privilege of representing the DOD/VA Interagency Program Office as the current Acting Director. Our servicemembers, veterans, retirees, and their families deserve nothing less than the best possible care and service that DOD and VA can provide, with a seamless transition for servicemembers as they move from Active Duty to veteran status.

To this end, DOD is committed to two equally important objectives, improving the data interoperability with both VA and our private sector care partners, and modernizing our electronic health record to provide our clinicians and beneficiaries the best possible tool available.

Over the past 18 months, we have made significant progress in achieving these objectives. Today, the DOD and VA share a significant amount of health data, more than any other two major health systems in the United States.

DOD and VA clinicians are currently able to view records of more than 5.9 million shared patients who have received care from either department, and we have recently extended this capability to the VA's benefits adjudicators.

This data is available in real time, and the number of records viewable by both Departments continues to increase. VA and DOD have successfully accessed this data through our current systems nearly a quarter million times a week.

Interoperability requires a steadfast commitment and continuous improvement. Just last week, we deployed software updates and delivered updated national standard data maps. This upgrade allows us to be more comprehensive, reliable, and responsive than ever in sharing data with VA and our private sector partners, and enables data exchange with the Social Security Administration and our DOD beneficiaries through TRICARE online.

On a parallel path, DOD's modernization effort is well underway. An independent analysis of our requirements and the robust health IT (information technology) marketplace concluded that the acquisition of an off-the-shelf product would allow DOD to leverage the latest commercial technologies, improve usability and interoperability, and ultimately provide savings to the American taxpayer.

We are currently in source selection, and the Department remains on track to award the contract later this year. This competitive acquisition process will capitalize on the robust commercial EHR marketplace and leverage industry's real life experiences with deploying and managing a large health system modernization.

Although we will not know the final figure until the contract is awarded, we estimate the new competitive contract will save DOD at least \$5 billion compared with the previous joint iEHR (integrated electronic health record) acquisition plan.

Most importantly, interoperability with the VA and the private sector remains paramount and will not be compromised. Our goal is a system for the future which is open and flexible and can easily adapt to changing requirements.

The system must support our military readiness by addressing the increasing demands across a spectrum of military operations, including forces deployed and those afloat, and must also contribute to our ability to perform our health mission and enable all mission elements of the military health system.

This includes casualty care, humanitarian assistance, disaster response, a fit, healthy, and protected force, healthy and resilient individuals, families and communities, education and research, and performance improvement.

DOD and VA remain in mutual agreement that interoperability with each other and our private care partners is a top priority. We also agree that we should be leaders in health data sharing and continue to support each other's modernization efforts.

This strategy makes sense for both Departments and provides the most effective approach moving forward to care for our servicemembers, veterans, and their families.

In the past 18 months during my tenure, DOD and VA have done more to improve our interoperability and modernize our systems than in the previous 5 years of effort. This is a result of getting back to acquisition basics, getting the requirement right, thinking like a taxpayer, and delivering on our promises.

Chairman Cochran, Vice Chairman Durbin, and members of this subcommittee: Thank you for the opportunity to testify today. The Department of Defense has taken very seriously its responsibility to provide first-class healthcare and enable the seamless sharing of health records with the Department of Veterans Affairs and our private sector care partners.

PREPARED STATEMENT

The Department greatly appreciates Congress's continued interest and efforts to help us deliver the healthcare that our Nation's veterans, servicemembers, and their dependents deserve, whether it is on the battlefield, at home with their families, or after they have faithfully concluded their military service.

The Department of Defense and our colleagues at the Department of Veterans Affairs will continue to work closely together in partnership with Congress to deliver benefits and service to those who sacrifice so willingly for our Nation.

Again, thank you for this opportunity, and I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF CHRISTOPHER A. MILLER

Chairman Cochran and Ranking Member Durbin, thank you for the opportunity to address the Subcommittee on Defense of the Senate Appropriations Committee. I am honored to represent the Department of Defense (DOD) as the Secretary's program executive responsible for the Department's efforts to modernize our electronic health records (EHRs) and to make them interoperable with those of the Department of Veterans Affairs (VA) and private sector providers. I also have the privilege of representing the DOD/VA Interagency Program Office (IPO) as the current Acting Director.

Our Service members, Veterans, retirees, and their families deserve nothing less than the best possible care and service the DOD and VA can provide. Our mission is to fundamentally and positively impact the health outcomes of active duty military, Veterans, and eligible beneficiaries. To this end, DOD is committed to two equally important objectives: improving data interoperability with both VA and our private sector care partners, and awarding a contract to modernize our electronic health record by the end of fiscal year 2015.

Over the past 18 months, we have made significant progress in achieving these objectives. Today DOD and VA share a significant amount of health data—more than any other two major health systems. DOD and VA clinicians are currently able to use their existing software applications to view records of more than 5.9 million shared patients who have received care from both Departments. This data is avail-

able today in real time and the number of records viewable by both Departments continues to increase. VA and DOD healthcare providers and VA claims adjudicators successfully access data through our current systems nearly a quarter of a million times per week.

On a parallel path, DOD's modernization effort is well underway. An independent analysis of our own requirements and the robust health IT marketplace concluded that the acquisition of an off-the-shelf product would allow DOD to leverage the latest commercial technologies, improve usability and interoperability with the private sector as well as with VA, and ultimately provide savings to the American taxpayer. We are currently in source selection and the Department remains on track to award the contract later this year. Although we won't know the final figure until the contract is awarded, we estimate the new competitive contract will save at least \$5 billion when compared with the previous joint iEHR acquisition plan. Most importantly, interoperability with VA and the private sector remains paramount and will be achieved as mandated by Congress.

Our goal is a system for the future which is open and flexible and can easily adapt to changing requirements. The system must support our military's operational readiness by addressing the increasing demands across the spectrum of military operations, including forces deployed and afloat. It must also contribute to the overall ability of DOD to perform its health mission and enable all mission elements of the Military Health System including casualty care, humanitarian assistance, disaster response; a fit, healthy, and protected force; healthy and resilient individuals, families, and communities; and education, research, and performance improvement.

DOD and VA remain in mutual agreement that interoperability with each other and our private care partners is a top priority. We agree that this broader interoperability can best be achieved with our current strategy to pursue separate, interoperable systems. This strategy makes sense for both Departments and provides the most effective approach moving forward to care for our Service members, Veterans and their families. We have had direct senior-level oversight from both Departments as well as rigorous oversight from both Congress and the Executive Branch. In the past 18 months during my tenure, DOD and VA have done more to improve our interoperability and modernize our systems than in the previous 5 years of effort.

BACKGROUND

As you are aware, in 2009, the Departments were called upon by the President to, "work together to define and build a seamless system of integration so that when a member of the Armed Forces separates from the military, he or she will no longer have to walk paperwork from a DOD duty station to a local VA health center. Their electronic records will transition along with them and remain with them forever."

To that end, the Departments are constantly collaborating as we pursue complementary paths to achieve interoperability for the EHRs of Service members, Veterans, retirees, and beneficiaries. Specifically, DOD's goals are:

- Provide seamless, integrated sharing of standardized health data among DOD, VA, and private sector providers; and
- Modernize the Electronic Health Record (EHR) software and systems supporting DOD and VA clinicians.

Goal 1: Provide Seamless Integrated Sharing of Standardized Health Data Among DOD, VA, and Private Sector Providers

Over the last 30 years, information technology has revolutionized industry after industry, dramatically improving the customer experience and driving down costs. Today, in almost every sector besides health, electronic information exchange is a common way to do business. A cashier scans a bar code to add up our grocery bill. We check our bank balance and take out cash with a debit card that works in any ATM machine across the globe.

Achieving this type of seamless data integration is dependent on achieving a common set of data standards across all healthcare venues, not on sharing the same software system. Since 2008, DOD and VA have been exchanging a significant amount of electronic information. Unfortunately, the information was in multiple disparate tools and most of the information had not been standardized so that it could be used for automated reminders or in electronic clinical decision support. As an example, DOD and VA had different names for "blood glucose" in their software systems, making it difficult for clinicians to integrate and track blood sugar levels of diabetics across the two systems. For data sharing and interoperability to be meaningful and useful to clinicians, healthcare data must be mapped to standard codes and displayed in a user-friendly way. This is equally important for sharing data with our private sector partners who use a variety of different health IT systems.

DOD and VA, with the assistance of the IPO, have completed the initial mapping of all structured data and clinical domains to national standards, thereby establishing the foundation of the two Departments' seamless data integration. Because we mapped much of our data to national standards, we will also be able to increasingly share this information with our private care partners who use many different health IT systems. In the example I just mentioned, today, and moving forward, both VA and DOD clinicians will see a common, standardized name for a patient's blood glucose results that can also be matched up with data from the private sector. We now have this standardized data for almost a million medical terms, and we are working to further improve and maintain these data maps moving forward.

Building upon the achievement of a common set of data standards between the two Departments, DOD has continued to develop and deploy follow-on interoperability initiatives, including development and expansion of the Joint Legacy Viewer (JLV), an integrated display of DOD, VA, and private sector data for clinicians. The Department has expanded the capacity, functionality, and number of users of JLV. Originally developed as a pilot program with 275 users at 9 sites, there are currently more than 3,700 JLV users at more than 270 sites across DOD and VA with access to 5.9 million patient records. This includes the successful deployment of JLV to 325 users at 56 of the 57 Veterans Benefit Administration Regional offices and other key sites. Over the next year, the Department plans to fully incorporate private sector care data into the JLV and data sharing infrastructure and continue its rolling deployments. By the end of April, the Departments plan to begin the next phase expansion of JLV to more than 10,000 users to meet the Health Executive Committee's (HEC's) approved requirements. As JLV capacity and use increase, the Department will begin to phase out existing legacy viewers, with full consolidation planned in 2016.

In April, the Department plans to conduct an Operational Assessment (OA) to independently evaluate our interoperability efforts. The OA will be a scenario-based test conducted by the Operational Test Agencies in an operational environmental with typical users at an Army, Air Force, Navy, and a VA clinic. The OA will determine the effectiveness (business process support and accuracy), suitability (usability and reliability), and survivability (cybersecurity) of the system.

For DOD, achieving data interoperability with VA is also the path forward to exchanging health information with private healthcare providers. Today, more than 60 percent of all Service member, dependent, and beneficiary healthcare is provided outside a military treatment facility through TRICARE network providers. DOD exchanges its electronic patient health data with the public and private sector by means of the DOD Virtual Lifetime Electronic Record-Health Exchange (VLER-H/E) that is connected to the national e-Health Exchange. DOD is focused on deploying private sector interoperability to our military treatment facilities around the country that have an associated private sector Health Information Exchange (HIE) that is connected to the eHealth Exchange. Currently, DOD is one of 81 participants in the eHealth Exchange. DOD plans to connect to an additional 15 HIE partners by the end of the year, based on functional and business factors.

The Departments have made substantial progress toward interoperability, and by June 2015 DOD will have met the fiscal year 2014 National Defense Authorization Act (NDAA) requirement that our EHR system be interoperable with VA with an integrated display of data that complies with IPO-identified national standards. In addition, DOD's upcoming acquisition of a modernized EHR system will reflect our steadfast commitment to continued interoperability. The Request for Proposals (RFP) contains requirements for interoperability and criteria that were coordinated with VA and the HHS Office of the National Coordinator for Health IT (ONC). Looking forward, we will continue to improve data sharing efforts with VA and the private sector in order to create an environment in which clinicians and patients from both Departments are able to share current and future healthcare information for continuity of care and improved treatment.

Goal 2: Modernize the Electronic Health Record (EHR) Software and Systems Supporting DOD and VA Clinicians

From 2010 to 2013, DOD and VA executed a joint program called the integrated Electronic Health Record (iEHR) in an attempt to create a single next-generation EHR system, led by the DOD/VA Interagency Program Office (IPO). In February 2013, VA independently determined that their best course of action was to evolve their current legacy system, the Veterans Health Information Systems and Technology Architecture (VistA), rather than pursue a new joint system. The underlying factors that made evolving VistA a logical and sound decision for VA—a workforce trained to use the system, in-house development and support capacity, and an already-installed EHR baseline in all of their hospitals—do not apply to DOD.

In response to VA's decision, DOD performed an extensive analysis that determined many viable off-the-shelf EHR products could potentially meet our requirements in a cost-effective manner that would allow us to benefit from industry's robust competitive EHR software marketplace. The Government used to be the leader in medical information technology, but industry advances in recent years have far eclipsed our capabilities. This competitive strategy will leverage commercial industry adoption which has increased from approximately 40 percent of private-sector clinicians using some type of EHR in 2007 to 78 percent at the end of 2013¹. It will also save us more than \$5 billion compared to the prior joint iEHR strategy.

As part of this new strategy, the Undersecretary of Defense for Acquisition, Technology & Logistics (AT&L) assumed responsibility for healthcare records interoperability and related modernization programs. DOD established the Defense Healthcare Management Systems Modernization (DHMSM) Program Office and dedicated a Program Manager to lead a competitive acquisition process that is evaluating off-the-shelf solutions which will offer reduced costs, schedule, and technical risk, and will provide access to increased current and future capability by leveraging advances in the commercial marketplace.

Currently, we are employing a comprehensive open standards approach for our EHR and interoperability programs, which is accelerating the achievement of the President's open standards agenda. EHR software is not a defense-unique product, and developing clinical software is not a core competency for DOD. The EHR marketplace in the U.S. is expected to reach \$9.3 billion this year; VA and DOD combined make up less than 5 percent of the total U.S. market for healthcare management software. We want to engage and leverage this vibrant marketplace to help us identify the solution approach that provides best value and meets our operational requirements.

Over the last year, I have engaged extensively with industry and government agencies to learn from prior business acquisition programs. As part of our market research efforts, we met with healthcare organizations including Intermountain Healthcare, Northwestern Memorial Hospital, the Children's Hospital of Wisconsin, Kaiser Permanente, Hospital Corporation of America, Inova, and Presence Health to open dialogue regarding acquisition, development, and sustainment of their EHR systems. These conversations with healthcare and other health IT industry leaders provided valuable insight and lessons learned that informed our acquisition strategy.

One of the main lessons we learned from industry was the importance of early engagement with the functional community. As a result, the Program Office formalized the DOD clinical community's relationship to the acquisition by establishing the role of Military Health System (MHS) Functional Champion within the program. The Functional Champion is charged with leading the functional requirements process, representing the clinical community's interests throughout the acquisition, and leading workflow standardization. The MHS and each Service has a designated Functional Champion.

Since October 2013, the DHMSM program has conducted four Industry Days and released seven Requests for Information and three draft RFPs; garnering more than 2,000 questions and comments. The final RFP was released on August 25, 2014 and proposals were submitted on October 31, 2014. Source selection is currently underway and competition has been robust. A competitive range determination was made on February 23, 2015 and DOD is on track to award a contract by the end of fiscal year 2015. After contract award, the modernized EHR system will be independently tested to ensure it meets operational and interoperability requirements for effectiveness, suitability and interoperability with VA and private sector healthcare providers.

Our early engagement with industry also reinforced the value of establishing a realistic deployment timeline. Our aggressive timeline is consistent with similar EHR modernization efforts in the commercial industry. The program has tailored its acquisition strategy to streamline documentation and gain schedule efficiencies. We are committed to collaborating with industry and pursuing this modernization in a transparent and fair way that maximizes competition. In alignment with the deadline set out in the fiscal year 2014 NDAA, Initial Operational Capability is planned for the end of 2016 at eight sites, representing all three Services, in the Puget Sound area of Washington State. Full Operational Capability, currently estimated for Fiscal year 2022, will include deployment to medical and dental services of fixed facilities worldwide, including 55 hospitals, 352 clinics, and 282 dental clinics. Deployment will occur by region (three in the continental U.S. and two overseas).

¹ONC, Physician Adoption of Electronic Health Records (<http://www.healthit.gov/newsroom/physician-adoption-ehrs>).

through a total of 24 waves. Each wave will include an average of three hospitals and 15 physical locations, and last approximately 1 year. The full deployment schedule is being evaluated as part of source selection and will be baselined at contract award; the objective is to maximize the speed of deployment without increasing risk or compromising performance or suitability.

To support the release of the final RFP release milestone, the DHMSM Program Office developed a formal life cycle cost estimate (LCCE) and schedule estimate for the EHR modernization program. The current DHMSM (LCCE) is roughly \$10.5 billion. This estimate covers 18 years from fiscal year 2014 through fiscal year 2032 and includes all deployment and sustainment costs over the life of the program. A review of the current DHMSM LCCE against the August 2012 IPO LCCE for the joint iEHR program indicates the current approach will save the DOD more than \$5 billion. As part of DOD's ongoing acquisition program rigor, these cost and schedule estimates are being refined and will be further updated prior to contract award. Additionally, an Independent Cost Estimate will be developed to support contract award. We expect that estimate to reflect additional cost savings as a result of the competitive acquisition process.

A new operational medicine joint Program Office has been established under PEO DHMS to lead the EHR deployment to operational medicine environments worldwide, including theater hospitals, battalion aid stations, hospital ships, forward resuscitative sites, naval surface ships, aero medical platforms, and submarines. This Program Office will deliver the DHMSM EHR system plus additional theater medical capabilities to support operational, peacetime, and humanitarian care to provide better care for all military healthcare beneficiaries, and is developing a fielding strategy to synchronize EHR deployment between garrison and operational forces. Our objective is to field to these environments concurrently with fixed facility deployment, but the schedule will be subject to the availability of operational units for modernization. We are in the process of finalizing the acquisition strategy for operational medicine deployment.

DOD/VA INTERAGENCY PROGRAM OFFICE UPDATE

The DOD/VA Interagency Program Office (IPO) is responsible for establishing, monitoring, and approving the clinical and technical standards profile and processes to create seamless, integration of health data. In this role, the IPO has collaborated closely with the Office of the National Coordinator for Health IT (ONC) to ensure the national standards identified meet the interoperability needs of the Departments. The IPO has also worked with DOD and VA to oversee the mapping of the Departments' health data to these standards.

National standards make it possible to increase the level of data exchange and computability. These standards serve as a common language for DOD, VA, and private sector data which will comport and format the information shared. IPO's partnership with ONC to pursue greater use of national standards provides the vital link which makes DOD and VA data interoperable with that of the private sector, and which provides the Departments' EHR systems the flexibility to respond to the evolving healthcare marketplace.

Over the past year the DOD, VA and the IPO have been integrated into ONC's planning for national health IT advancements. The Departments and the IPO have been key contributors in the development of ONC's recently-released Interoperability Roadmap. Looking forward, DOD, VA and the IPO plan to: support development of a coordinated governance and a framework for nationwide health IT interoperability; collaborate with the standards community and industry to improve technical standards and implementation guidance for sharing and using a common clinical data set; and participate in ONC efforts to incentivize the healthcare community to share data using common technical standards, including a common clinical data set.

During the past year, the IPO has completed three important technical guidance documents for interoperability. The Information Interoperability Technical Package (I2TP) is an implementation document that outlines IPO-required and -recognized national health data interoperability standards. The Health Data Interoperability Management Plan (HDIMP) documents the IPO and Departments' strategy and role in supporting the Departments' management and governance efforts. The Joint Interoperability Plan documents the IPO and Departments' technical vision for interoperability and their plans for achieving seamless data integration. Together, these documents provide a foundation for the Departments' efforts toward seamless interoperability.

CONCLUSION

Chairman Cochran, Vice Chairman Durbin, and members of this Committee, thank you for the opportunity to testify today. The Department of Defense has taken very seriously its responsibility to provide first-class healthcare to our Service members and their beneficiaries, and to enable the seamless sharing of integrated health records with the Department of Veterans Affairs and our private sector care partners.

The Department greatly appreciates the Congress' continued interest and efforts to help us deliver the healthcare that our Nation's Veterans, Service members, and their dependents deserve. Whether it is on the battlefield, at home with their families, or after they have faithfully concluded their military service, the Department of Defense and our colleagues at the Department of Veterans Affairs will continue to work closely together, in partnership with Congress, to deliver benefits and services to those who sacrifice so willingly for our Nation. Again, thank you for this opportunity, and I look forward to your questions.

Senator COCHRAN. Thank you very much, Mr. Miller. I am pleased now to call on my distinguished friend from Illinois, Senator Durbin.

Senator DURBIN. Thanks, Senator Cochran. If you look at the overall budget, there are very few areas where you can see an increase. In this fiscal year, there was an 11-percent increase in medical research at the Department of Defense. That was not an accident. It was a conscious decision made by the subcommittee to provide resources to the Department of Defense for their valuable medical research.

I was hoping that it would complement the efforts underway at the National Institutes of Health, the Department of Veterans Affairs, and the Centers for Disease Control, and we have asked the question repeatedly to make certain that coordination was taking place so the efforts could be complementary, not duplicative, taxpayers' dollars well spent on medical research that first serves our men and women in the military but then serves America and the world at large.

Which of you can comment on that coordination?

General HOROHO. Thank you, Senator. We now have formal agreements in place with the National Institutes of Health, with other interagency partners, along with our joint sister services, to ensure that we have the right processes in place to avoid duplication and ensure we are focusing on military relevancy.

Senator DURBIN. That is what I want to hear. I am going to ask that question every time I get the chance because I am going to continue to fight for more medical research across the board.

NIH. Senator Murkowski just joined us and feels passionately about the same subject, and certainly in the Department of Defense.

MILITARY HEALTH SYSTEM REVIEW

Secondly, Secretary Hagel ordered a review, medical military health system review, which was reported recently. It really was designed to assess the performance of our military health systems when it came to safety, quality, and access, particularly in relation to top performing healthcare systems.

The results were mixed. One assessment team member, Janet Corrigan, said and I quote, "Overall, MHS performance mirrors what we see in the private sector, a good deal of mediocre, pockets of excellence, and some serious gaps."

How are you and other leaders of the military health system responding to this report?

Admiral NATHAN. Thank you for the question, sir. The review confirmed that we have a system of accountability. We see at headquarters what is happening at the deckplate and in the fields. That is the good news. What is reported out in the field by our various hospitals as far as quality, access, and safety is faithful to what we see at headquarters. We believe we have a good picture of what is happening out there.

This review also allowed us to look at how we can collaborate better as an enterprise, we share many things, but we may have somewhat different approaches to these three aspects of care. This has allowed us to be more congruent and to create a formalized pathway to what is called “a high reliability organization,” similar to an aviation or the nuclear Navy. When you look at the number of occurrences in the nuclear Navy, they are essentially mistake free. The focus is how do we replicate that performance? The review has been good for this assessment.

Senator DURBIN. I concede a point made earlier in your testimony that the military health system has proven themselves over and over again when it comes to dealing with combat situations, trauma situations, maybe teaching the rest of our health systems a lot of lessons that are valuable.

I would like to get into this question of safety and quality performance. General Travis, I note in your biography that you are one of the few pilot physicians. This question is really up your alley.

General TRAVIS. Yes, sir.

Senator DURBIN. There is a doctor in Boston named Atul Gawande who has written a book about lists. He starts the book by telling the story of flying complex bombers before World War II, where the missions failed. The decision was made by our Air Force to come up with a checklist for pilots, which I think is being used virtually across the board, at least across our Nation, everywhere. He suggests the same kind of meticulous checklist needs to be established for medical care to achieve goals when it comes to safety and quality performance.

I would like to hear your thoughts on that.

General TRAVIS. Yes, sir. It is a great question. I tell my folks and anyone else who will listen that I started flying fighters, and back in the day when I was flying Red Flag missions and leading Red Flag missions, almost every year we would lose an airplane and a couple of people in those exercises.

At the time, and this was—I hate to tell you how long ago it was—almost 39 years ago, we kind of expected that you might lose some airplanes and people every year in training out of my squadron, as kind of the cost of readiness.

The way I translate this out of the MHS review—frankly, the three of us all welcomed the opportunity for the deep dive and the look, as my partners have said. The way I translate that from what you referenced is why would we expect or why we would accept that we would harm any patients as the cost of doing healthcare. It is not a military problem. It is a healthcare problem.

We have all strapped this on. I think the MHS review, frankly, energized us on something we have all cared deeply about for years. We do not get into this business to hurt anybody or harm anybody, and why would we expect or accept any errors or patient harm is just kind of the way healthcare goes.

You are exactly right, there is congruence. The difference is, I would tell you, you just cannot do it with a checklist. The culture of safety has to be there. The transparency, much like a flight lead in a flight who could be a Lieutenant—and I have done it—could tell a Colonel you screwed up, sir, and here is what I would do different in the future. We ought to have our technicians, our youngest airmen, no matter what their rank, being able to tell the team we screwed up or let's not screw up, time out, we are about to do something wrong.

That is the culture we are all very willing to embrace. I think it is a natural for DOD, to be honest with you, highly reliable.

Senator DURBIN. Thank you, General. Thank you, Mr. Chairman.

General TRAVIS. Yes, sir.

Senator COCHRAN. Thank you, Senator. The Senator from Alaska, Ms. Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman. Welcome to the committee and thank you all for all that you do for our military and their families.

MEDICAL RESEARCH FUNDING

I have had on occasion before this committee to bring up the issue of ALS (amyotrophic lateral sclerosis), Lou Gehrig's disease, and the association—the not-well-understood association—between the incidence of that disease and those who have served in our military. Those who have served are twice as likely to be afflicted with ALS, which you know is a very horrible and debilitating disease.

I appreciate the question that Senator Durbin has presented this morning in terms of the efforts that we focus. We have the peer-reviewed medical research program, and again I have a particular interest in what is going on with the ALS research program.

Last year, this committee appropriated funds directly to the ALS research program, and in previous years it had been included on a list of eligible conditions when the House took the lead there in appropriating the funds.

The program is currently funded at \$7.5 million. The question to you, General, is whether in your view this research program towards ALS has proven effective, if it is a good investment. If the subcommittee were to look to perhaps increase that allocation upwards, would you view that as a good investment given the presumptive nature of this disease to our military?

General HOROHO. Thank you, ma'am. First, thank you very much for the support in the past in this important area. There has been almost \$47 million since fiscal year 2007 that has funded about 34 different projects that are ongoing, and then the \$7.5 million you talked about in fiscal year 2013, fiscal year 2014 and 2015.

I do believe it is important. I think we are still learning much from exposure to Gulf War illness. We are continually looking at

all of our soldiers, sailors, airmen, and marines' environmental exposures and different diseases that have an outbreak.

Any time we have research dollars that are dedicated to allow us to look at preventive measures and protective measures, I think it is very important.

Senator MURKOWSKI. That will continue to be a priority and I will be working with my colleagues here on the committee as we try to gain a better understanding as to how that connection may actually work.

Let me ask a question to both you and General Travis here this morning. As you know, the Army has been involved in a series of community meetings, these listening sessions, to discuss the force structure reductions. In my State, we have had a couple different hearings, one up in the Interior where the Army is considering the possible deactivation of the first Stryker brigade combat team (BCT). It is the only BCT there at Fort Wainwright. Fort Wainwright, as you know well, hosts Bassett Army Community Hospital, which also serves the airmen there at Eielson.

At the same time Army is considering a possible reduction, Air Force is looking at plussing up with the addition of the two squadrons of F-35s, and then down at JBER (Joint Base Elmendorf-Richardson), we have another situation where the Army is considering the possible deactivation of the 4th Airborne BCT, the only BCT there at JBER. The 673rd Medical Group serves the members of this brigade as well as the airmen of JBER.

If the Army were to eliminate its brigade at JBER, would we see a downsizing of the 673rd Medical Group to the detriment of the airmen at JBER?

The question to you this morning is as we are looking to these possible reductions in forces, either up in the Interior or down at JBER, the impact then to the delivery of medical services for our Air Force given the very joint nature of our facilities at JBER and Wainwright/Eielson, if you could speak to that.

General TRAVIS. Ma'am, thanks for that. We have a very good system of looking at not just population at risk but missions that need to be supported in these Bases, and certainly as there are shifts on the Air Force side, and we always acknowledge what is going on with the populations we support, or in the case of Wainwright, the folks that support us.

Because of all the changes in Air Force force structure, similar to the other services, we have a pretty agile system for manning and supporting these facilities to make sure our Airmen, their families, and if our joint partners need us to support them as well, as we do at JBER.

I would tell you we will certainly respond and support to make sure we do not lose the capability. Alaska is challenging. We certainly do not want to leave them unsupported there.

Senator MURKOWSKI. General Horoho—

Senator COCHRAN. Senator, your time has expired.

Senator MURKOWSKI. May I just ask General Horoho—

Senator COCHRAN. If the Senator from Rhode Island would yield to you for that question.

Senator REED. I will yield.

Senator MURKOWSKI. I just wanted to know if General Horoho had a comment on Bassett.

General HOROHO. I will do it very quickly. We are actually committed to maintaining capabilities because of the remoteness of that area.

Senator MURKOWSKI. Excellent. Thank you.

Senator COCHRAN. Thank you, Senator. The Senator from Rhode Island.

Senator REED. Thank you. Now I would like to interpret what I said in Rhode Islandese, which is I was going to yield to Senator Mikulski but she gracefully said no, and then of course, I yielded to Senator Murkowski. That is the English translation of what we do constantly in Rhode Island. Forgive me; okay?

Mr. Miller, thank you for your great work. One of the great efforts we have had underway is to make uniform the DOD and VA healthcare records. When are we going to start seeing DOD personnel who retired several years ago start coming back into this electronic system? Is that on your horizon?

Mr. MILLER. Sir, I would argue that is happening as people come back into the system, we are bringing those records back into electronic. I do not think personally, sir, it is cost effective to go pull those records back in, but I will tell you every time we have an encounter/interaction, we are working to bring those people into electronic so that data can flow, sir.

Senator REED. It is not a conscious effort to get 100 percent, it is case by case?

Mr. MILLER. Yes, sir.

Senator REED. If someone leaves Active service today and becomes a patron of the VA, how fast will their records show up in the VA system?

Mr. MILLER. Sir, it is already there. The way the system works today, sir, is we have data exchange that works in real time, so today if I could take you to a VA Clinic, they could pull up and see a DOD record, and then as part of the transition, prior to separation, we do send data to have it available on the VA side.

I view success here really in the eyes of our clinicians and our users, and that is what I am listening to right now, and they do seem happier than they have been. I do not think we are ever completely done here, I think we have work to do, but they are able to see and access more information than they had previously.

What I mentioned in my comments, the extension into the benefits side, I think, will have a significant impact as we also think about who else also has to have access to that information to really make sure we are taking care of our veterans, sir.

Senator REED. Can you just quickly list, what are the great challenges? We hear constantly of difficulty with electronic records and financial records, et cetera. What are the challenges you are facing and how are you facing them, and do you need more resources to do it?

Mr. MILLER. Sir, what I usually tell people is my problem right now is not a technical problem; that our challenges today are really about people and process. We can pick any number of tools in this area, the commercial market is very robust, there are lots of solutions out there, I think the more important factor is how are we

training our people, how are we getting the culture right, and how we are really making sure we get them ready for this.

I think one of the things you will look at when you go through any of these kinds of transformations is the fundamental rethinking of our business processes, so we are being efficient and we are really thinking about how we want to do business in a consistent manner to help us in terms of quality and safety.

I would offer that today, where my focus really is is making sure in partnership with the services and with the Defense Health Agency that we are really thinking through the training piece, the deployment piece, and making sure that we have sufficient resources to make sure we handle that.

I have visited a number of facilities that have gone through this, and their message routinely is it is all about the changed management and the training, it is not about the tool, it is about how you use that tool, and that is what we are focused on, sir.

Senator REED. That is where the resources are going?

Mr. MILLER. Sir, if you look at my cost estimate, you will see there are parts of it that deal with buying the tool, but I think you will also see a significant investment that is going towards training and the changed management, and the things necessary to make this thing really operationally work, sir.

Senator REED. Thank you, sir. To the Surgeon Generals first, thank you for your service, and your compassion and care of our personnel, both uniformed and their families.

MEDICAL FACILITIES

One of the issues that came up in the report of the Uniform Commission on Compensation was the need to make medical facilities more accessible, not just for convenience of the patients but also so you have the skill levels necessary to be a deployable force if we go into the fight.

Just a quick comment, General Horoho, and then all the way down the line.

General HOROHO. Yes, sir. We have actively been engaged in that over the last several years, putting our green suiters where military relevancy and competency is needed, so in our medical centers, the focus of combat casualty care, also graduate medical education programs, and partnering with civilian communities and having trauma care consortiums to bring in the right level of care. It is an active engagement across the board.

Senator REED. Will the access of additional retirees into the system as proposed by the Commission help you with that training expertise and experience?

General HOROHO. We have been actively, over the last couple of years, brought in as many patients as possible that we can make sure that it is the right type of patients, so the skill sets are related to military relevancy.

Senator REED. Admiral and General.

Admiral NATHAN. Yes, sir. Although it is important and key to focus on the combat casualty and trauma capabilities, the majority of the issues that plague commanders in the combat arena are diseases and non-battle injury.

MEDICAL FACILITY ACCESSIBILITY

As General Horoho said, it is important that we have a wide range of patients from the young pediatric patients, and since we are all involved in non-combatant evacuations and humanitarian missions, to the elderly. We must be capable of caring for all disease states.

We have a robust collaboration with academic centers, and in addition, all of us have robust partnerships with shock trauma areas so we can continue to cycle our trauma teams through very busy trauma centers in the civilian sector to keep their skills sharp between conflicts.

Senator REED. General Travis, please.

Senator COCHRAN. The time of the Senator has expired.

Senator REED. Thank you. General, will you take that one for the record?

General TRAVIS. Yes, sir.

Senator REED. Thanks.

[The information follows:]

Yes, increasing access of additional retirees into the system will help us with maintaining the medical readiness skills necessary to meet the mission. While combat trauma capabilities are extremely important and have allowed us to achieve a 97 percent survival rate, diseases and non-battle injuries has been the majority (77 percent) of the care provided in the deployed environment. Allowing patient access with the right volume, right acuity, and right diversity of care, from trauma to rehabilitation ensures our medics keep their skills sharp to respond to any situation from combat to humanitarian missions. In addition, we also have a robust civilian partnership collaboration with academic centers where our medics are able to get valuable patient care experience when we can't provide it within our own facilities.

Senator COCHRAN. The distinguished Senator from Maryland, Ms. Mikulski.

Senator MIKULSKI. Well, we know we got the Maryland part, I do not know about "distinguished." Good morning, everybody. Mr. Chairman, thank you for holding, I think, one of the most important components of our service to the military. This is really the commitment to making sure that we are committed to the well-being of the war fighter and to the war fighter's family.

I want to first of all thank General Travis for his service. I understand he is retiring. We just want to thank you for the great job that you have done. We hope we see you more, and thank you for the kind words about Maryland Shock Trauma.

To you, General Horoho, I understand you will be leaving this post at the end of 2015.

General HOROHO. Yes, ma'am.

Senator MIKULSKI. I wish you could have made it to 2016, we could have had a going away party together. I know we are both committed.

First of all, before I get to my question, on behalf of Maryland and the people I represent, we want to really thank you. We want to thank you and we want to thank every man and woman under your command who really serves the needs of our military. You have saved lives for them on the battlefield, you have saved families and the intact marriages because of what you do back home.

We just really want to say thank you to every doctor, nurse, social worker, support service, we could go through an honor roll of

clinical care in this team approach you have had. We want to say thanks.

The second thing is we in Maryland are very grateful for military, the presence of military medicine. We are so proud of the fact that we have Walter Reed Naval, Bethesda in our State.

Mr. Chairman, the fact that they are not climbing the walls at this hearing is a tribute to the fact that there are no scandals. There is no latest fad in the Washington—not fad, surprise in the Washington Post that everybody is here raising questions or raising hell about.

First of all, what a great transition that has been, and the wonderful research that is done, Fort Detrick, who made invaluable contributions during the Ebola crisis, I could go on and on. Your presence in Maryland is just so fantastic.

Let me get to my question. Your work in acute care is stunning, trauma medicine. It is really ground breaking and pioneer work, and I think even Nobel Prize quality. Post-acute care, rehab. My question goes to the war fighter and the war fighter's family, and to the larger, we are almost primary care, because we think of the stunning achievements, which I absolutely just cherish when we think about what you have done.

My question is have we changed the culture, and is there a cultural impact upon your work, I know what the President wants, in terms of looking at the family, looking at primary care, looking at the Healthy Base Initiative, and so on. Are they just like waiting you out, General, for you to leave? Are we only going to focus on acute care and the research and military relevance? Military relevance to me is also are our children of our war fighters having their own post-traumatic stress.

My question to you is where are we on that culture that goes to not only the dramatic things that are done and stunning things that are done, but this day-to-day kind of medicine that keeps families intact and war fighters?

I will just close with this question. They closed commissaries. Well, Healthy Base, buying food. In Maryland, at Fort Meade, it has become almost like the settlement house for teaching nutrition to the young enlisteds and their families. They were closing fitness centers at 6 o'clock at night when many of our war fighters do not go to work out until 11 o'clock.

I see my time is up, but I feel very passionately about this, so that when I am here, it is not only buying the latest robot to do the latest surgery, which I support, but where are we in terms of this?

General Travis, do you want to comment?

General TRAVIS. Yes, ma'am. Amen, because frankly, healthy resilient families make healthy resilient airmen, soldiers, sailors, marines. Those warriors have to know their families are healthy and well taken care of, number one.

Prevention of childhood obesity, lowering smoking and other tobacco use, addressing adult obesity and retiree obesity are all things, and the Healthy Base Initiative is one of the more personnel leaning kind, because it is a community issue, not just a medical issue.

As you say, commissaries, commanders, everybody has to pay attention to this. Frankly—

Senator MIKULSKI. Is the military committed to this approach?

General TRAVIS. I believe we are.

Senator MIKULSKI. I am not questioning you, please, do not misunderstand. Are they just waiting you out?

General TRAVIS. No, ma'am. I think frankly—I will speak for the Air Force and I will let my partner speak, and I will keep it very brief—I think certainly in our Air Force we are starting to hear much more about human performance, availability of warriors to do the job because as a downsizing force that still has tremendous stress on those warriors. That stress translates to the families, by the way. If folks are healthier, happier, more resilient, able to do their job—I think commanders get that now, not just medics—we see that in high stress communities where they have actually asked us—they used to kind of keep us at arm's length, you know, "Doc, we will come see you when we need you"—not anymore. They come to us and say how can you help us do this better, and we are doing that across the Air Force.

Senator MIKULSKI. General.

General HOROHO. Ma'am, the Army is committed to this transition of readiness, resiliency, not just of our soldiers but their family members. We are looking at the Performance Triad being embedded in the DNA of our Army. We are now going to have a pilot of 30,000 soldiers and their families.

We learned from the first pilots that we did, and we have enhanced our training, and we have incorporated this into our comprehensive soldier family fitness. We are also embedding the tenets of the Performance Triad into the Army's strategy of having our soldiers being human weapon systems and looking at cognitive, physical, mental, spiritual, and emotional dominance.

I believe this is a culture change that is taking root.

Senator MIKULSKI. Why did they want to close commissaries and zero out the Healthy Base Initiative?

General HOROHO. Ma'am, I am not sure—

Senator MIKULSKI. I do not mean closed every commissary, but there was an actual downsizing. I envisioned, as did the Fort Meade Garrison Commander, that the commissary became a tool that they used for the family, and just what they did—he was stunned by the farmers market turnout, the young enlisted spouses, the comradery that came out of it, as well as nutrition and so on.

You are telling me big Army embraces this, but big budget does not.

General HOROHO. I do not want to answer for Installation Command.

Senator MIKULSKI. It is not about an Installation Command. I get this. What you need to know, as I wrap up this year and next year, that this thinking is going to go by the wayside, when exactly that is what we need to bend the healthcare curve.

We would welcome additionally through other conversations, I know our time is limited this conversation.

Admiral Nathan, I want to go to Mr. Miller, Mr. Chairman, with your indulgence, on the medical records or health records. Are they

only about the war fighter or are they records also of the military family?

Mr. MILLER. Ma'am, when I talk, I talk about the entire family. I think one of the things you are going to see us from a technical perspective try to do is to embrace the family more and to provide more access.

I think one of the things we are clearly hearing from industry is you have to increase the patient engagement, and obviously taking care of our family members is a part of that equation. I do not think just about the medical record in terms of the theater piece or taking care of our Active Duty, I also think every day about making sure that our beneficiaries and our veterans are also being taken care of, ma'am.

Senator MIKULSKI. One, we really need this link to VA. I know the chairman is so committed also to veterans' healthcare. What we find again is the war fighter might be in good shape, but the family is undergoing other things, not only a traumatic thing like breast cancer with the spouse, but also the mental health of the children, with a major family provider away, it has created—I am not saying our kids are nervous or anxious or whatever, but we have to look at this.

Mr. MILLER. Yes, ma'am. I think one of our objectives is to be able to provide a platform where the commanders have access to information and can make those decisions to really understand the overall readiness of the force.

I also think we have to remember that many of our dependents actually go on Active Duty, and think about the enlistment process and the accessions process, if we could just pull that information forward and not have to ask them to go through another physical or ask them to fill out another form.

We are thinking holistically, ma'am, about how do we really have a longitudinal record for both our Active and those dependents so we really can understand the total force.

Senator MIKULSKI. This is my last question. The chairman has been generous. In Maryland, we have everyone from Walter Reed Naval, Bethesda to Johns Hopkins and University of Maryland and their hospitals. We hear also from the private practice of medicine as well as academics, they are fed up with these medical records. I hear doctors wanting to retire because they feel they are doing more time with clicks and modems than with patients and Motrin. Are you facing that?

Mr. MILLER. Yes, ma'am. One of the things we are looking at, too, is visibility. Let me give you another example. My niece's husband is a flight surgeon in the Air Force down in Biloxi. He grew up going through his medical training using electronic health records. When he reported to his first duty station and had to use our current system, he called me and basically yelled at me.

He said you are taking away my productivity, this system is not user friendly, I know how to use the commercial systems, you have put me back a decade.

I think it is important to realize in our military health system, we have multiple generations of people using the systems, and I think we are going to find some people embrace it and other peo-

ple, we are going to have to work with them to get them comfortable.

I think the most important thing that I would tell everybody is this is a tool. What we have to focus on is what are outcomes and how we want to use that tool, because if we have that focus on making it user friendly and we think about really what our people need, we can make it work.

I think where you hear these bad examples are when people do not take time to really work through the changed management and get people comfortable. That is when you hear these bad examples, ma'am. I do hear that, and I think we understand it, and I think we are trying to do everything we can to mitigate it, ma'am.

Senator COCHRAN. The time of the Senator has expired, a couple of times. The distinguished Senator from Montana, Mr. Daines.

Senator DAINES. Thank you, Mr. Chairman. In February, I had the true privilege of presenting the Defense of Freedom Medal to a great Montana resident named Richard Zelinsky. Richard was one of the more than 200,000 patient movements since 9/11, and he spoke highly of the outstanding treatment received in the Center, received in the theater, during his transport, and at Landstuhl Regional Medical Center.

Lieutenant General Travis, on behalf of Richard, a resident of Stevensville, Montana, I want to thank you and your team for the professionalism and the dedication they give day in and day out, be it here at home or in the most dangerous parts of the world, to keep our men and women ready to serve our country at a moment's notice.

I would also like to extend those thanks to all the fine folks sitting here. Oftentimes when you come to the Hill, you do not get much of a thank you, but when you put it on the face of those men and women that you serve, you know it is worth it. Thank you, along with those who are serving out in the field that may not always get the thanks they truly deserve.

Mr. Miller, a question. As the DOD Health Care Management System has worked to improve information between the VA and the DOD, have these efforts led to a measurable improvement in the healthcare our service men and women receive?

Mr. MILLER. Sir, I think one of the things we are working through right now is really understanding what our outcomes are. We have agreed to specific use cases that the DOD and the VA are looking at, and are actually starting to look at our measurements and how we are doing.

I would offer, sir, I view success really from the people that are using the system. I go around a lot and I talk to a lot of people, and I would tell you today that I can put VA clinicians and DOD clinicians in the room, and we are actually now talking about looking at the same information, we are actually able to access that information, and we are able to improve the timeliness that it takes to do things, whether on the clinical side or on the BVA (Board of Veterans Appeals) side, by the tools that we have provided over the past 18 months.

We are talking about metrics. We are looking at how we share information. I think ultimately success here is really whether or

not our clinicians and the BVA claims adjudicators can get their job done, and that is who I am listening to right now, sir.

Senator DAINES. What do you think—I spent 28 years in business. There is an old saying, “If you aim at nothing, you will probably hit it.” It is a complex system, but I know the role of leadership is to distill it down to the most important elements to measure those things that have the greatest leverage and ensure they connect to how you define quality of care and outcomes.

What are two or three of those metrics as you are looking at that process that you think we ought to be focused on in measuring success?

Mr. MILLER. Yes, sir. A couple of things we are looking at right now. One is what percentage of our records are correlated, which basically means whether or not I can electronically send the information from the DOD and VA and we can access it in real time. We are doing things there to make sure that number continues to rise.

We are also looking at how much the people are actually using the system. I think one of the challenges of these complex systems is whether or not the people actually understand that some of this information is available, how do you get access to it. We are looking at that kind of information.

The other piece that I would remind everybody is we talk a lot about DOD/VA. The reality is 60 percent of our care on the DOD side comes from the private sector. If we really want to understand the integrated health and what is really going on, you have to tackle that problem, and this is a much bigger national issue, but we are involved and we are looking at how much we are able to start pulling that information in so that when we are looking at it, we really truly have the complete picture and our clinicians can make the best decision no matter where that care is being provided.

Senator DAINES. How much of the voice of the veteran in that process is part of that metric in terms of a survey going directly to the customer, if you will?

Mr. MILLER. Right now, sir, actually both the VA and the DOD is going through an assessment process to really understand how well our systems are working. One of the things I brought into this process is a real structured discipline, and one of the things you do in this manner is you really go through a test and evaluation phase.

The VA under their Veterans Health Administration is doing a formal survey of their users to include the different areas. They are going to be getting those results back and share that with us.

On the DOD side, the Director of Operational Test and Evaluation in the Army Test and Evaluation Command, they are also going through a test process for us that will start here in April, and we are going to take those results and we are going to basically put them on the table and talk about what we have to do to further implement them.

Senator DAINES. Mr. Miller, thank you. One last question, we are running out of time. We have seen the very disturbing news this last week about personal information being compromised here of the men and women who wear the uniform.

What steps have you taken to ensure the privacy of our service men and women as this information gets shared between agencies?

Mr. MILLER. I would offer that the protection of information is obviously a challenging and I think growing threat. I think on our side what we are doing as we look to the future is if you look at our request from industry, you are going to see some very rigid and challenging security things that we are asking for.

Obviously, there are rules like HIPAA (Health Insurance Portability and Accountability Act) and our home security, but we are actually going a step further and really asking to see things like the source code, and really trying to understand how secure the systems are, so that we can do everything possible to protect that information because it is valuable information and sensitive. We are bringing in some real information assurance experts as part of our team to make sure we do this right.

Senator DAINES. As a closing comment, we have heard a lot of concerns from our veterans on this and our men and women who are serving, and they are worried, now my family's information will be accessible to other folks who would be a significant threat to our country, and we must do everything possible to ensure we protect the privacy of information of our men and women in uniform.

Thank you.

Mr. MILLER. Yes, sir.

Senator COCHRAN. The Senator from Missouri.

CONSTRUCTION PRIORITY

Senator BLUNT. Thank you, Chairman. Thank you for holding this hearing. General Horoho, last year, I asked you at this same hearing about the hospital at Fort Leonard Wood, which you said was still the number one construction priority on the Army side for healthcare.

I asked General Denaro the other day that same question. He said still number one, but no money. Do you have any thoughts about how we move forward with either upgrading that hospital or what we need to be doing as it relates to that important facility at Fort Leonard Wood?

General HOROHO. Yes, sir. Actually, it still is our number one priority within hospitals. We now have it in the POM, 17-21 POM, which last year when I said it was a priority, we had some funding shortfalls, had to make some decisions, and now we were able to get it back into the POM. It is still my number one priority of the hospitals.

Senator BLUNT. It is in the 17-21 POM?

General HOROHO. Yes, sir.

Senator BLUNT. Mr. Miller, do you work with both the VA and the other military facilities? Is that part of your job?

Mr. MILLER. Sir, I do work with them from an IT perspective, sir. I do not directly deal with them in a clinical perspective, but I do in terms of IT support both departments.

Senator BLUNT. I thought it was interesting, the number you mentioned earlier of how much private sector healthcare is delivered to people in the military. Obviously, in the VA, Congress expressed a great desire last year to give veterans more options. I do

not know that you can answer this question based on what you are doing with the VA.

I would say I think the VA has been really short in taking advantage of that opportunity. I think yesterday they finally said well, in terms of facilities, maybe we can measure 40 miles by how long it takes to get there rather than the shortest distance on any map. I think the term that may have been used was “as the crow flies.”

The other thing that I am concerned about, Chairman and others here, is that the 40-mile facility radius, certainly the intent of the Congress was 40 miles from a facility that provided the treatment you needed rather than a facility that provides any treatment.

We may have to go back and clarify that. It is clear to me the VA, if they wanted to, could clarify that just as easily as they could decide what the 40 miles was intended to meet.

For veterans to have a choice and for the VA to compete to provide services to veterans is an important thing.

The other thing I want to talk about, maybe with all three of our panelists here, is what is happening in terms of—what changes do you see in terms of mental healthcare in your part of the Service.

BEHAVIORAL HEALTH

Again, last year we talked about this. General, I asked you if you thought the NIH estimate, which at the time was one out of four Americans, had a diagnosable and almost always treatable mental health issue, and you said yes.

Your answer was we recruit from the general population. I asked did you think that extended to the military, and you said we recruit from the general population, we have no reason to believe our number would vary from that.

I think in all our branches of service, we are moving toward trying to be sure we look at that as another health issue and look at ways we can take people with that particular health problem and make them just as integral a part of what happens in defending the country, if it is treatable.

Let's just go down the line of what you see happening and what you hope to happen in the mental health area as you look at the service men and women you are responsible for from their healthcare perspective.

General HOROHO. Thank you, Senator. We have been making great strides in the area of psychological health and behavioral health. With embedded behavioral health, we have seen a reduction, a 50-percent reduction, of inpatient admissions. We have more than doubled to about two million outpatient visits, so I think that shows we are decreasing the stigma.

MENTAL HEALTH INTEGRATION

We have trained our primary care providers in behavioral health, and we have them in our soldier-centered medical homes where soldiers get their care as well as our patient-centered medical homes, where family members get their care, so it is much more accessible.

In looking at readiness and resiliency, we have the Performance Triad focusing on sleep and nutrition, what we found is 75 percent of depression is related to challenges within sleep, so I think if we

can focus on healthy minds, healthy bodies, we can help to reduce the impact of behavioral health issues. We are looking at this from just not a clinical perspective, from actually readiness, resiliency, and really improving the lives of our soldier members through a system perspective.

Senator BLUNT. Chairman, if I could have an extra minute, I would like for Admiral Nathan and General Travis to answer that question as well. Admiral.

Admiral NATHAN. Thank you, sir. One of the changes you will note when you come into our military facilities today as opposed to a year ago, on the intake, no matter who you are visiting or why you are there, you will be asked by the intake person how are you doing mentally, do you have any concerns of self harm, do you have any concerns of harm to others.

Also, as General Horoho said, we now embed mental health in our primary care environments, so in the good old days, if your primary care doctor felt that maybe you need to get some help, they suggested you make an appointment. You would have to make an appointment. Now, we can in many cases walk you down the hall to see someone, with open access, to give you at least a few minutes of a preliminary intake in mental health. There is eye-to-eye contact and a warm handoff with patient and provider.

Finally, I would say as General Horoho mentioned, if we are going to make great inroads in this country, inside or outside the military, we have to reduce the stigma. I think we have been working very hard at that now to get people comfortable with raising their hands and saying I need help.

Senator BLUNT. Thank you. General.

General TRAVIS. Yes, sir. I will not repeat anything that has been said, but it all applies to the Air Force as well. Just to put a short kind of operational spin on this, we now have commanders that understand that their operators, intelligence folks, RPA operators, distributed common ground stations, explosive ordinance disposal, and many more of our career fields, the commanders now get the fact that these folks—it is just part of the human condition—can have mental health issues or problems brought on by stress, that range all the way from drug and alcohol use to domestic violence, all the way to suicide.

We have committed ourselves in the Air Force medical home to now embedding the right forces where they are needed in these high stress career fields, some with Top Secret clearances, that have access to these individuals while they are at work doing things they cannot talk about at home.

In fact, one of the intel wings last year told me those embedded folks prevented two suicides. They know it. I would tell you there are a whole lot more airmen and families that could have been impacted by mental health sequelae, short of suicide. Suicide is on the far end.

All those other things that make airmen unwell or their family is dysfunctional, I know we have had an impact there, too. Stigma, in my opinion, is coming down. I really do believe that.

Great question, sir. Thank you.

Senator BLUNT. Thank you. Thank you, Chairman.

Senator COCHRAN. Thank you, Senator, for your contribution to the hearing.

Let me ask General Horoho, we are looking at the possibility that we are going to have to recommend cut backs in funding under the state of the law. As it exists right now, we are restrained in the total amount under the Budget Act that we are going to be able to make available to all appropriated accounts.

There is competition on what is needed and what is not needed. Can we do without one thing or less than we have been used to seeing for certain programs?

The Senate's approach has been to include the majority of the medical research additions in competitively research grant programs. This allows medical experts to come in and actually advise and recommend which programs would be the most, I guess, cost effective, or what seems to be the emergency of the day that needs attention.

How are you recommending that we consider these choices in order to have the least pain and difficulties as we go through the next fiscal year?

General HOROHO. I will take that one, Senator, and then we will just pass it all the way down.

Senator COCHRAN. Thank you.

General HOROHO. Right now, across our medical centers and our healthcare system, we are at the PB16 sequestration level. When we look at the provision of care and the ability to maintain all of our missions, that includes also our research funding. Right now, we are good where we are at.

MEDICAL RESEARCH FUNDING

If we go into the sequestration in the Budget Control Act, that will have almost like a double effect when we look at it through the lens of military healthcare, and research is included in that. We have already taken our reductions that are there.

My concern when we look through the lens of research, that is what has allowed us to remain relevant in the challenges that we have seen over the last 13 years, because we had funded research that answered questions that were asked 20 to 15 years ago.

I think we have to be very, very careful in the right amount of research funding to ensure that we keep the right scientists on the team, that we keep relevancy for our war fighters and the ability to be honest, to be cutting edge in our technology, and our provision of care for the future.

Admiral NATHAN. Sir, I would just add that research generally is funded by two mechanisms, one is the advocacy of yourself and Congress in apportioning money from a base for research, and the other is in reimbursable monies that come from grants, academic grants.

As the economy swings up and down, those grants can go up and down, so we rely on a fairly consistent funding base that we receive from Congress to maintain the continuity of that research as grants fluctuate.

Senator COCHRAN. Do the others on the panel have a comment or suggestion?

General TRAVIS. No, sir. I agree with everything that was said.

Mr. MILLER. No comment, sir.

ADDITIONAL COMMITTEE QUESTIONS

Senator COCHRAN. Thank you very much. I appreciate the cooperation and assistance of the distinguished panel. I think you have done an excellent job of putting in perspective a lot of the day to day challenges that we face providing military benefits in the way of hospitals and healthcare, making sure our forces are healthy and ready to protect our national security interests.

For that, we are all very grateful to the medical community who are represented today by this distinguished panel. We appreciate your cooperation with our committee.

Senators may submit written questions to follow up on issues we discussed today. We hope you will be able to respond to those inquiries or follow up questions within a reasonable time, so we can include your responses in full in our committee report.

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

QUESTIONS SUBMITTED TO LIEUTENANT GENERAL PATRICIA HOROHO

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

Question. The Committee has consistently recommended in past bills significant funds for medical research. Can you describe some of the positive outcomes that resulted from this funding and provide an update on any recent breakthroughs that are attributable to the medical research done by the Department?

Answer. The Department of Defense (DOD) and the Services manage and execute the President's Budget (PB) core medical research and development programs to address threats to which our military personnel are exposed from accession, through training, deployment, evacuation, treatment and rehabilitation. Building on the backbone of the service's military laboratory medical research and development subject matter expertise, the additional funds added by Congress enhance the core capabilities and accelerate and broaden the military medical research base.

Recent successes of the military core research and development efforts include but are not limited to the following:

Adenovirus Vaccine.—The Adenovirus Vaccine is a Defense Health Program (DHP)-funded development program that resulted in the delivery of a Food and Drug Administration (FDA) approved vaccine to prevent Febrile Respiratory Illness (FRI) in military basic training populations. Recent data shows that the vaccine is 99 percent effective in preventing FRI caused by adenovirus types 4 and 7, and annual net savings associated with the vaccine's use are estimated at \$20 million.

Burn Resuscitation Decision Support System-Mobile (BRDSS-M).—The BRDSS-M is an Army-funded development program that resulted in the delivery of an FDA cleared medical device to both the battlefield and civilian medical treatment facilities. The BRDSS-M is a first of its kind algorithm-based decision assist system that tracks hourly fluids administered and urine output to generate a recommendation of appropriate fluid needs. This helps to avoid over- or under-resuscitating burn patients, directly reducing morbidity and mortality.

Joint DOD VA Suicide Data Repository (SDR).—The SDR was developed in conjunction with a DHP study that compiled data to answer questions about suicide and deployment. The SDR allows researchers and policy makers to use population level data to evaluate trends and answer questions about suicide. The collaborative effort involves the Defense Suicide Prevention Office, Veterans Health Affairs, and Centers for Disease Control's National death Index and has been functional since February 2014.

Junctional Hemorrhage Control Devices.—Prior to 2010 there were no available technologies to control junctional (inguinal/axillary) hemorrhage in the field. Extensive development, testing and funding provided by the Army, Navy, Air Force Labs and U.S. Special Operations Command have led or contributed to the FDA approval and commercialization of four devices for controlling blood loss.

Vascularized Composite Allotransplantation (VCA).—Face and extremity (hand/arm) transplants—which are known collectively as VCAs—are still relatively rare occurrences. VCA improves functional and aesthetic deficits remaining after reconstructive surgery has reached the limits of its capability and it is one of the regeneration and repair research focus areas of the Armed Forces Institute of Regenerative Medicine II (AFIRM II). The Army, DOD, NIH, VA, have provided \$75 million in funds over 5 years, which have been leveraged to add a much larger civilian investment.

ZMapp™.—The Chemical and Biological Defense Program, Science and Technology is responsible for the development of ZMapp™ a cocktail of three monoclonal antibodies developed by Mapp Bio in collaboration with the U.S. Army Medical Research Institute of Infectious Disease and the Public Health Agency of Canada for the treatment of Ebola. ZMapp™ is included in ongoing phase II efficacy clinical studies in West African Ebola patients and was used to treat patients in the United States in 2014.

The additional committee recommended funds above the President's Budget have allowed the Department to fund many breakthroughs in medical research which benefit the population as a whole. The additional funds also allow funding of research that benefits military family members and other beneficiaries. Below are a few examples of the many Congressional Special Interest (CSI) funded successes, through the Congressionally Directed Medical Research Programs (CDMRP):

The Joint Warfighter Medical Research Program (JWMRP) is currently funding the advanced development of a vaccine for the prevention of Norovirus for prevention of viral gastroenteritis disease, common in closed or semi-closed facilities (ships, schools, hospitals, etc.). Also, the program is funding the development of the Transportable Pathogen Reduction and Blood Safety System; a portable device that reduces the risk of transmission of pathogens in whole blood collected and transfused in combat. In addition, the JWMRP is funding the final validation and performance testing and conduct of clinical trial evaluations of the Non-Electric Disposable Intra Venous Infusion Pump; an en-route pain management and anesthesia/sedation pump that does not require to be connected to an electrical outlet.

The approximately \$850 million DOD investment in Traumatic Brain Injury (TBI) research since 2007 has resulted in two FDA-cleared devices to screen for signs related to TBI (The Defense Automated Neurobehavioral Assessment tool and the Ahead-100™ device) and a blood test for biomarkers released by a brain injury that is in the final stages prior to FDA submission. In addition, a number of DOD-funded strategic initiatives are in progress, including the TBI Endpoint Development consortium in which the FDA is an active participant to validate meaningful comparison measures for TBI diagnostic and therapeutic trials. This initiative is widely viewed by academic and industry as the critical path to the future approval of diagnostics and treatments for Traumatic Brain Injury.

The Spinal Cord Injury Research Program supported the design, test and evaluation of an implantable stimulator to activate and/or block nerves involved in bladder functions to normalize them after spinal cord injury. The investigator was further selected for fiscal year 2014 funding to modify and optimize the device for human use and to submit an Investigational Device Exception application to FDA.

The Amyotrophic Lateral Sclerosis (ALS) Research Program successfully identified a number of neuroleptic compounds that restored mobility in model systems, such as the antipsychotic drug pimozide. Armed with the data, the investigator initiated a trial to look at the effect of pimozide in ALS patients.

The Multiple Sclerosis (MS) Research Program funded the development of an advanced MRI technology, known as diffusion basis spectrum imaging to reveal underlying complexities of MS, including inflammation, demyelination, and axonal loss. This is important, as edema and inflammatory cells obscure the ability of current imaging techniques to detect actual damage to the nerve and makes it harder to assess the effectiveness of treatment approaches.

CDMRP also manages and executes Breast, Prostate, Ovarian and other cancer research programs which have resulted in several breakthroughs that are or will be game-changers in the way these cancers are diagnosed, managed and/or treated. For instance:

The Peer-reviewed Cancer Research Program funded investigators that confirmed the idea that Ultra Violet DNA damage occurs long after exposure due to the creation of lesions at the molecular level, resulting from exposure to the sun and damage of melanin in the skin layers.

The Prostate Cancer (PC) Research Program established the PC Clinical Trials Consortium (PCCTC) to support the collaborations and resources necessary to rapidly execute Phase II or Phase I/II clinical trials of therapeutic agents or approaches for the management or treatment of prostate cancer. As of 2013, the PCCTC accrued

over 3,500 PC patients to more than 80 phase I/II clinical trials studying more than 50 drugs. The PCCTC rapidly advanced 9 therapeutic candidates to phase-III clinical testing, including 2 FDA approved drugs, Zytiga® and Xtandi®, which have become standard of care for the treatment of advanced PC.

The Breast Cancer Research Program (BCRP) funded a project that created a test that can detect metastatic breast cancer (BC) with efficiency better than any test currently used. This test will allow for the monitoring of patients response to treatments and for appropriate change of course by physicians to avoid ineffective, unnecessary therapies.

BCRP also funded a project that demonstrated estrogen receptor positive (ER+) BC is sensitive to a cyclin-dependent kinase inhibitor, in combination with hormonal therapy. This combination therapy provides improvement in progression-free survival. FDA granted accelerated approval in February 2015 under the trade name Ibrance®. If ongoing phase-III trials confirms it benefits, Ibrance® can become a new standard of care therapeutic for ER + BC in post-menopausal women.

For more CDMRP information, please visit <http://cdmrp.army.mil/search.aspx>.

Question. The coordination between the University of Mississippi and Walter Reed's Army Institute of Research is an example of a strong partnership between the Department of Defense and academic research labs for addressing tough problems like malaria prevention and treatment. Do you believe the side effects of drugs used for malaria are limiting their safe and effective use in some troop populations? If so, what efforts are being made by the Department of Defense to develop new, safer drugs to reduce side effects?

Answer. Yes, the undesirable side effects of malaria and leishmania drugs directly impact their use for both disease prevention and treatment by Service Members. FDA-approved drugs currently available for prevention include mefloquine, doxycycline, and atovaquone/proguanil and they each have different side effect profiles. Mefloquine was once widely used to prevent malaria infection in troops. It now has a black box label warning of potentially debilitating neurologic and psychiatric side effects. Doxycycline can cause increased sensitivity to sunburn and gastrointestinal upset. It also interacts with common medications such as oral contraceptives. Atovaquone/proguanil, while the least toxic, must be taken daily to be effective. Military personnel returning from Afghanistan are treated for two weeks with the drug primaquine to clear Plasmodium vivax malaria, a relapsing form of the disease, from the liver. One percent of the military, 10 percent of African American males, carry a genetic defect and cannot take primaquine because they experience hemolysis during its use. Miltefosine is an approved oral drug with 70 percent efficacy against leishmaniasis, however its use is limited by gastrointestinal and reproductive toxicity.

To develop new drugs, the DOD program has established unique assays and screens to evaluate the safety and efficacy of all new drugs for malaria and leishmaniasis. These capabilities do not exist in the commercial market, thus DOD researchers are uniquely positioned to target safety concerns borne out from years of experience developing anti-parasitic drugs. DOD researchers at the Walter Reed Army Institute of Research (WRAIR) and the Navy Medical Research Center, funded by the Military Infectious Diseases Research Program (MIDRP), are currently conducting studies specifically targeted toward the development of newer and safer drugs for the prevention of malaria.

The University of Mississippi has a long history working with the WRAIR. One example was formed in 2008 where the WRAIR, the University of Mississippi and the State University of New York Upstate Medical University, Syracuse formed the Non-Hemolytic 8-AQ Consortium, focused on improving the safety and efficacy of drugs like primaquine, the only FDA approved drug effective against relapsing malarias found in Afghanistan, Southeast Asia, and Korea. The consortium has also determined that up to 10 percent of humans are unable to properly convert primaquine into a form active against relapsing malarias. Studies are underway to develop new drugs which overcome this particular metabolic deficit and which will be broadly active and safe in all populations. The consortium has also reformulated primaquine into a form demonstrating reduced hemolysis in animal models. Clinical trials with this new primaquine formulation will soon be undertaken to assess its safety profile in genetically deficient human populations.

These advances by WRAIR and their multiple academic partners can now inform both new drug development campaigns to overcome these liabilities and clinical practice to ensure that the right drugs are selected for the right populations to treat and ultimately eradicate malaria.

Question. Traumatic Brain Injury is a major concern for this subcommittee, and I believe that we should continue to pay close attention to prevention as well as treatment. I am aware of research efforts to advance protection systems for our men

and women in uniform, including pneumatic cushioning systems in helmets that are already being used by the National Football League to prevent head injuries. How do treatment costs associated with traumatic brain injury compare with prevention costs associated with the development and fielding of personal protective equipment?

Answer. The Army is committed to protecting the force from traumatic brain injury through improved training, equipment, and understanding of the mechanism of injury. The cost of treating Traumatic Brain Injury (TBI) varies greatly depending on the severity of the injury as well as other factors. With prompt identification, medical evaluation, education and prescribed rest, most concussions, also known as mild TBI (mTBI), will resolve without significant lasting symptoms. However, a small percentage may have ongoing symptoms including but not limited to headache, balance issues, fatigue, poor concentration, depression and other psychological symptoms that benefit from targeted medical, behavioral health and rehabilitation intervention. Army Medicine spent approximately \$52 million in fiscal year 2014 on specialty care for all severities of TBI, from mild to severe; education and training efforts; and improved tracking and surveillance of TBI. The long term Army TBI care costs for those with ongoing symptoms, those who require intensive outpatient programs, those who leave the military, or those who transition to the VA are yet undefined as a whole.

We do not know the total cost over time of researching, developing, fielding and sustaining personal protective equipment (PPE) for either the reduction of risk of events that can cause TBI, or the severity of injuries that occur. The cost of developing, researching and procuring (PPE) is spread across equipment development mission space, where medical research informs the process. As TBI is caused by a blow or jolt to the head, and is associated with not only impact but also linear and rotational acceleration forces on the head, PPE is unlikely to eliminate completely the risk of internal shaking and shearing of brain tissue. However, the Army will continue to research and develop equipment and technologies towards the goals of improved effectiveness of PPE and reduced risk for our Soldiers.

QUESTION SUBMITTED BY SENATOR ROY BLUNT

Question. LTG Horoho, you stated in the Defense Health Hearing that the General Leonard Wood Army Community Hospital (GLWACH) is back on the Army's Program Objective Memorandum (POM) for fiscal year 2017–2021. With recent Army hospitals costing anywhere from \$404 million at Ft. Riley to \$1.03 billion at Ft. Belvoir, it seems the \$210.9 million currently on the Future Years Defense Program (FYDP) for Army medical facility replacements makes a hospital replacement nearly inconceivable. Considering other services' medical MILCON priorities and the looming threat of sequestration, how likely is it the GLWACH will actually make it onto the fiscal year 2017 FYDP? What is the timeframe when GLWACH will no longer be suitable as a facility?

Answer. The Defense Health Agency received senior Military Health System (MHS) leadership concurrence to place the first \$100 million increment (of an estimated \$540 million project cost) of the GLWACH Hospital Replacement project in fiscal year 2021. The Army is reasonably certain that the first increment of the GLWACH Hospital Replacement project will remain in the fiscal year 2017–2021 FYDP. The project will compete in the next round of the Defense Health Program (DHP) Medical MILCON Capital Investment Decision Model (CIDM) process to determine MHS priority and incremental funding profile. Future fiscal impacts (e.g. sequestration or other funding constraints) could affect the outcome of CIDM. The estimated project cost of \$540 million must be incremented over 2–3 fiscal years in order for the DHP medical MILCON program to stay within its projected total obligation authority.

MEDCOM and the GLWACH staff are committed to ensuring the safety and providing the best care to our patients and staff, regardless of the age of our facilities. Until a facility replacement project is completed, the MEDCOM will incur higher facility life-cycle costs associated with maintaining and sustaining this 50-year old facility. MEDCOM has completed and continues to enact numerous alteration and addition projects to address some of the changes in healthcare delivery and population increases over the lifespan of the facility. However, the integrity of the original facility and many of its systems are failing. Recent repair projects focused on the Mechanical, Electrical, Plumbing (MEP) systems and Air Handling Units (AHUs).

QUESTIONS SUBMITTED BY SENATOR RICHARD J. DURBIN

Question. A 2011 Department of Defense (DOD) study found that the prevalence of smoking is higher in the military (24 percent) than the general adult population (20 percent), and that the availability of cigarettes on military installations made it easier to smoke. A 2008 Department of Defense (DOD) study found that almost one in three military smokers began doing so after enlisting. Service members who use tobacco are more likely to drop out of basic training, and sustain injuries. In 2008, smoking among active-duty members cost the Department more than \$1.6 billion annually in smoking-related medical care, increased hospitalization, and lost days of work. In addition, the Navy is actively looking at banning tobacco sales on ships and bases, and the other services are considering it. Last year, this committee ended the taxpayer subsidy on tobacco sold at military commissaries.

Do each of you agree that smoking has an adverse impact on service members' health and on individual military readiness?

Answer. Yes, smoking has an adverse impact on Service-members' health and readiness. Past and present science demonstrates the irrefutable negative impact of smoking on every organ in the human body. Quitting smoking is the single most important action that a current smoker will take to improve their health and the length and quality of their life. Tobacco use and its negative impact are found to be more strongly related to combat readiness than other health issues.

Tobacco use among Service members has several negative impacts. Injured Soldiers who use tobacco are predisposed to a prolonged return to duty time, degrading the unit's combat readiness. A strong association exists between tobacco addiction and mental health diagnoses, mood disorders, and substance abuse. Also, tobacco use compromises dental health and contributes to medically non-ready Soldiers due to non-deployable dental classifications. Finally, Soldiers who smoke have significantly lower levels of physical fitness and are at increased risk for training injuries.

Question. Reducing tobacco use in the military would seem to be a win-win. Not only would it save lives, but it would also improve short-term readiness and save each service annual tobacco-related healthcare costs. Are the Surgeons General pursuing specific actions to curb tobacco use?

Answer. Ten Army military treatment facilities (MTFs) established Tobacco-free campus policies in support of TSG's vision. These policies address support for improving tobacco cessation access to care through increasing utilization of the TRICARE Quitline, Chantix, and availability of nicotine replacement therapy. Moreover, the Army offers tobacco cessation/counseling in Army Medical Homes, as well as leveraging technology in the Army Wellness Centers to educate clients on the availability of live chat quit tobacco access, and tobacco cessation text support programs, which reaches into the life space where people live, work, and play.

U.S. Army Public Health Command (USAPHC), Army Institute of Public Health (AIPH), Health Promotion and Wellness Portfolio, completed a 12 month evaluation of the Fort Stewart/Hunter Army Airfield Tobacco-free medical campus policy. This policy primarily focused on extending the tobacco free campus and did not establish a tobacco free workforce. The evaluation of the first Army tobacco free medical campus showed that employees experienced significant reductions in secondhand smoke exposure after the implementation of the policy. AIPH incorporated the lessons learned and evaluation results to inform the U.S. Army MEDCOM's Tobacco Free Living policy, tool kit, and Tobacco Free Living implementation document.

In an effort to protect our workforce from tobacco-related risks, we are expanding this policy across medical campuses Army-wide and adding the stipulation that employees cannot use tobacco while on duty. In addition, the Army is preparing to release a revised Army Regulation 600-63 (Army Health Promotion) which details several tobacco reduction initiatives. This revised regulation is expected to be published in the next 60 days.

Question. There are indications that the real cost of tobacco may be higher than the \$1.6 billion estimated in the 2008 study. Does the panel believe it would be useful for Congress to direct an updated study, which can also assess the impact of policy changes such as eliminating the subsidy for tobacco and the ban on smoking on submarines?

Answer. There is reason to believe the costs of tobacco-related healthcare and other costs may certainly be higher than previous estimates, particularly if we include issues related to third-hand smoke exposure. We believe that current policies (e.g., the lower tobacco pricing on military bases) are likely associated with (1) impaired troop readiness, (2) increased tobacco product usage, (3) increased preventable tobacco-related health problems, (4) increased burden on the DOD healthcare system for treatment and care of Active Duty Soldiers, Military Families and Veterans affected by smoking (1st, 2nd or 3rd hand smoking), (5) increased costs to the

DOD with less productive Soldiers (due to chronic illnesses caused by tobacco usage), and (6) decreased workforce productivity. Should Congress direct another study into the costs of tobacco use in the military, we would like to see an examination of tobacco-related costs associated with each of these areas. We'd also like to determine if any differences in these areas exist based on military tobacco policy changes.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question. DOD's medical mission is critical to our national defense and ensuring the health of the all-volunteer force. We have an important responsibility to protect the health and well-being of all of those in the DOD's care—servicemen, women, civilians, and their families. Our responsibility to provide that care extends to those who are deployed and to those at home. One of the challenges that DOD is continuing to grapple with is promoting access to mental health. I know the Department is working hard to reduce and eventually eliminate the stigma associated with mental health treatment so that more servicemen and women will avail themselves of the programs that have been setup to help them confront the trauma and stresses of war. In my view, eliminating this stigma is critical to giving servicemembers and deployed civilians the resolve they need to take advantage of the care they need to become whole again, and there is still work that needs to be done.

Can you give me your views on what you see are the major hurdles to eliminating the stigma associated with mental health treatment, and how this budget request programs funds to help overcome those hurdles?

Answer. Army Medicine has made significant strides in overcoming the hurdles of stigma associated with seeking behavioral healthcare through a number of efforts. Embedded Behavioral Health (EBH) and BH providers within primary care clinics were specifically designed to improve access to care by increasing the number of potential touch points through which Soldiers can initiate care. From fiscal year 2007 to fiscal year 2014, outpatient BH encounters increased from 900 thousand to 2.1 million. This has allowed the Army to provide care to Soldiers earlier in the course of their BH condition, before crisis occurs.

EBH, which embeds behavioral health providers within Army units, has significantly increased behavioral health visits and enhanced the communication between Commanders and behavioral health providers. In addition, having behavioral health providers available during sick call and routine medical appointments has also improved access to care.

PB16 allows Army medicine to successfully meet the ongoing high demand for acute BH appointments. This funding supports the plan of Army-wide implementation of EBH by September 2016. By reducing the distance between the Soldier, leaders, and the behavioral health provider, we have made progress in reducing the stigma barrier.

Question. The Department of Defense possesses one of the Nation's treasured institutions, the Uniformed Services University of the Health Sciences, which educates the next generation of Army, Air Force, Navy, and Public Health Service healthcare leaders and providers. I am interested in hearing the perspective of the Surgeons General regarding the value of the University and its graduates to the medical, nursing, and dental corps of the DOD and the Nation as a whole.

Can you offer some thoughts on the value that USUHS provides to the Military Health System and the Nation?

Answer. Thank you for the opportunity to highlight the exceptional value of the Uniformed Services University of Health Sciences (USU) to the Army. USU trains physician, nursing, and dental students through a rigorous healthcare education combined with equally rigorous training in leadership, military medicine and public health. Within the F. Edward Hébert School of Medicine, Daniel K. Inouye Graduate School of Nursing, and the Postgraduate Dental College, students learn in a variety of settings, including modern classrooms and laboratories, a world-renowned simulation center, major military hospitals and clinics stretching from Bethesda to Honolulu, summer operational experiences with military units, and highly demanding field exercises in order to prepare them to be outstanding clinicians and superb Army officers. Graduates leave USU as prepared, career-committed Army medical officers who are ready to perform in any setting, from a modern tertiary care hospital or primary care clinic to an operating room in a combat support hospital or a treatment tent in a refugee camp.

USU has graduated nearly 2,000 Army physicians, nurses, and dentists whose leadership and military unique training from the University have served the AMEDD extraordinarily well. Presently, 26 percent of the Army Medical Corps are

graduates of USU. These officers are more likely to assume major leadership positions, and in fact, comprise 40 percent of the current cadre of Army Medical Corps Colonels, with significantly higher levels of retention until retirement and forming the backbone of experience and leadership at senior levels. The Deputy Surgeon General is a USU graduate, and there are a number of current and former flag officers who are USU graduates.

USUHS provides the Army Nurse Corps (ANC) with opportunities for its officers to obtain degrees at all levels from a Masters in Nursing (MSN) to a clinical (DNP) or research nursing doctorate (PhD), allowing our personnel to pursue excellence in academics, scholarship and research. Since the ANC began enrolling personnel into the USUHS program in 1993, there have been nearly 1300 degrees conferred in these specialties: Master of Science in Nursing (636), Certified Registered Nurse Anesthesia (298), Family Nurse Practitioner (261), Perioperative Clinical Nurse Specialist (55), Psychiatric Mental Health Nurse Practitioner (22), and Doctor of Philosophy in Nursing Science (20). Each program's curriculum is designed with the military student in mind, ensuring they train in an environment that fully develops them in their role as an Army Nurse. The USUHS Anesthesia Nursing program is ranked 5th according to U.S. News and World Report 2015 ranking of best anesthesia nursing programs and 41st amongst all Graduate Nursing programs in the United States.

Question. Can you please speak specifically to what the Army is doing to align medical personnel training and certification to align with civilian standards to make it easier for these soldiers to eventually transition to civilian careers?

Answer. The Academy of Health Sciences (AHS), as part of the U.S. Army Medical Department Center and School (AMEDDC&S), aligns medical military training/medical certification with civilian standards, allowing for Soldiers to eventually transition to civilian careers.

All Army officers are required to enter the Army with a civilian degree. The additional officer clinical/medical training conducted builds on the initial entry degree and meets or exceeds civilian standards. This is accomplished through affiliations with various universities for the respective Areas of Concentration (AOC) for officers. For example, the AHS, AMEDDC&S, prepares Army officers in the 70A (Health Care Administrator) AOC to graduate with a Master's Degree in Healthcare Administration from Baylor University and subsequently certify with one of several civilian healthcare administration professional affiliations/societies.

There are only two enlisted medical Military Occupational Specialties (MOS) that require Soldiers to hold a credential in order to graduate from Advanced Individual Training (AIT) and become MOS Qualified (MOSQ). These are 68C, Practical Nursing Specialist (Licensed Practical Nurse), and the 68W, Healthcare Specialist (Combat Medic). Licensed Practical Nurses receive the National Council of State Boards of Nursing Licensure, and Combat Medics receive the National Registry of Emergency Medical Technician (NREMT) while in military training.

Additionally, the following military medical MOSs and Additional Skill Identifiers (ASI) require Soldiers to sit for their certification prior to graduating from AIT or advanced schooling: 68KM2: Cytology (Cytotechnologist); 68V: Respiratory Specialist; 68WF2: Flight Paramedic.

The following military medical MOSs and ASIs allow for Soldiers to sit for their certification prior to graduating, or at their follow on duty station, once all credentialing requirements are met: 68A: Biomedical Maintenance Specialists; 68B: Orthopedic Specialist; 68D: Operating Room Specialist; 68E: Dental Specialist; 68F: Physical Therapy Specialist; 68G: Patient Administration Specialist; 68H: Optical Laboratory Specialist; 68J: Medical Logistics Specialist; 68K: Medical Laboratory Specialist; 68L: Occupational Therapy Specialist; 68M: Nutrition Care Specialist; 68N: Cardiovascular Specialist; 68P: Radiology Specialist; 68Q: Pharmacy Specialist; 68R: Veterinary Food Inspection Specialist; 68S: Preventive Medicine Specialist; 68T: Animal Care Specialist; 68U: Ear, Nose and Throat Specialist; 68Y: Eye Specialist.

All of the Army medical MOSs have a degree plan through an approved Service Members Opportunity Colleges (SOC). In addition, many MOSs have a direct Memorandum of Understanding established with an individual college/university which have validated their programs. Recently, the National American University was added to the SOC for the 68W MOS (Combat Medic), awarding on average 45-60 credit hours towards an Associate of Applied Science in Emergency Medical Services, Bachelor of Applied Science in Management.

QUESTIONS SUBMITTED TO VICE ADMIRAL MATTHEW NATHAN

QUESTION SUBMITTED BY SENATOR THAD COCHRAN

Question. Do you believe the side effects of the drugs for malaria and leishmaniasis are limiting their safe and effective use in some troop populations? What efforts are being made by the Department of Defense toward the development of newer, safer drugs or toward reducing the side effects of existing drugs? Has the University of Mississippi/Walter Reed Army Institute of Research program produced a strong partnership between DOD and academic research labs for addressing these problems? Is this partnership effectively identifying alternative therapies and developing solutions to reduce the severe side effects of the existing malaria and leishmaniasis drugs?

Answer. The undesirable side effects of malaria drugs directly impact use of both malaria chemoprophylaxis (drugs used to prevent disease) and treatment. FDA-approved drugs currently available for chemoprophylaxis include mefloquine, doxycycline, and atovaquone/proguanil. Mefloquine was once widely used to prevent malaria infection in troops. It now has a black box label warning of potentially debilitating neurologic and psychiatric side effects. Doxycycline can cause increased sensitivity to sunburn and gastrointestinal upset. It additionally interacts with common medications such as oral contraceptives. Atovaquone/proguanil, while the least toxic, must be taken daily to be effective.

Military personnel returning from Afghanistan are treated with 2 weeks of the drug primaquine to clear *Plasmodium vivax* malaria, a relapsing form of the disease, from the liver. Individuals (1 percent of the military, 10 percent of African American males) are genetically deficient in G6PD (Glucose-6-Phosphate Dehydrogenase) and cannot take primaquine because they experience hemolysis during its use. Another approved oral drug, miltefosine, has 70 percent efficacy against leishmaniasis; however, its use is limited by gastrointestinal and reproductive toxicity.

DOD researchers, funded by the Military Infectious Diseases Research Program (MIDRP) at WRAIR/Naval Medicine Research Center (NMRC) in Silver Spring, MD, are currently conducting studies specifically targeted toward the development of newer and safer drugs for the prevention of malaria. The DOD program has established unique assays and screens to evaluate the safety and efficacy of all new drugs for malaria and leishmaniasis. These capabilities do not exist in the commercial market, thus DOD researchers are uniquely positioned to target safety concerns borne out from years of experience developing anti-parasitic drugs.

WRAIR has maintained a long and productive relationship with the University of Mississippi and other academic institutions to discover, design, and develop newer and safer anti-parasitic drugs required for military use but with little commercial value. The collaboration described here among scientists from WRAIR, University of Mississippi and SUNY Upstate Medical Center, Syracuse was formed in 2008 as the Non-Hemolytic 8-AQ Consortium. It is focused on improving the safety and efficacy of 8-aminoquinoline drugs like primaquine, the only FDA approved drug effective against relapsing malarias found in Afghanistan, Southeast Asia, and Korea.

The consortium has reformulated primaquine into a form demonstrating reduced hemolysis in animal models of G6PD. Clinical trials with this new primaquine formulation will soon be undertaken to assess its safety profile in G6PD deficient human populations. The consortium has also determined that potentially 10 percent of humans are unable to properly convert primaquine into a form active against relapsing malarias. Studies are underway to develop new 8-aminoquinolines which overcome this particular metabolic deficit and which will be broadly active and safe in all populations.

These advances by WRAIR and their academic partners can now inform both new drug development campaigns to overcome these liabilities and clinical practice to ensure that the right drugs are selected for the right populations to treat and ultimately eradicate malaria.

QUESTIONS SUBMITTED BY SENATOR RICHARD J. DURBIN

Question. A 2011 Department of Defense (DOD) study found that the prevalence of smoking is higher in the military (24 percent) than the general adult population (20 percent), and that the availability of cigarettes on military installations made it easier to smoke. A 2008 Department of Defense (DOD) study found that almost one in three military smokers began doing so after enlisting. Service members who use tobacco are more likely to drop out of basic training, and sustain injuries. In 2008, smoking among active-duty members cost the Department more than \$1.6 billion annually in smoking-related medical care, increased hospitalization, and lost

days of work. In addition, the Navy is actively looking at banning tobacco sales on ships and bases, and the other services are considering it. Last year, this committee ended the taxpayer subsidy on tobacco sold at military commissaries.

Do each of you agree that smoking has an adverse impact on service members' health and on individual military readiness?

Answer. I concur that smoking can adversely impact the health and readiness of our force.

Question. Reducing tobacco use in the military would seem to be a win-win. Not only would it save lives, but it would also improve short-term readiness and save each service annual tobacco-related healthcare costs. Are the Surgeons General pursuing specific actions to curb tobacco use?

Answer. Navy Medicine encourages tobacco free living, promotes tobacco free medical campuses and deglamorizes tobacco use as part of its overarching health promotion programs. Our Medical Inspector General inspects comprehensive tobacco control programming provided by Navy Medicine. Inspection items include tobacco cessation programs, policy and enforcement of tobacco use areas, and clinical practices such as screening, diagnosing and treating tobacco use.

Nicotine Replacement Therapies approved by the Food and Drug Administration have been made available to assigned service members aboard all ships, in all base clinics and pharmacies, and Battalion Aid Stations at no cost to the member since September 2012 and to family members via TRICARE in April 2013. Navy Medicine uses the evidence based Veterans Administration/Department of Defense Management of Tobacco Use Clinical Practice Guidelines for addressing and treating tobacco in Primary Care, Medical Home Port and Specialty Clinics. This clinical process is assessed through the use of metrics with the Population Health Navigator Dashboard.

Question. There are indications that the real cost of tobacco may be higher than the \$1.6 billion estimated in the 2008 study. Does the panel believe it would be useful for Congress to direct an updated study, which can also assess the impact of policy changes such as eliminating the subsidy for tobacco and the ban on smoking on submarines?

Answer. Our Nation has over 50 years of overwhelming evidence of the impact of tobacco use and disease, disability and death. Additionally, there is scientific evidence and research-tested interventions to reduce tobacco use and secondhand smoke exposure. I believe we should direct our efforts to on-going general health and readiness surveillance which includes self-reported tobacco use in the electronic health record and health risk assessments. An updated study is not recommended that this time.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question. DOD's medical mission is critical to our national defense and ensuring the health of the all-volunteer force. We have an important responsibility to protect the health and well-being of all of those in the DOD's care—servicemen, women, civilians, and their families. Our responsibility to provide that care extends to those who are deployed and to those at home. One of the challenges that DOD is continuing to grapple with is promoting access to mental health. I know the Department is working hard to reduce and eventually eliminate the stigma associated with mental health treatment so that more servicemen and women will avail themselves of the programs that have been setup to help them confront the trauma and stresses of war. In my view, eliminating this stigma is critical to giving service members and deployed civilians the resolve they need to take advantage of the care they need to become whole again, and there is still work that needs to be done.

Can you give me your views on what you see are the major hurdles to eliminating the stigma associated with mental health treatment, and how this budget request programs funds to help overcome those hurdles?

Answer. One of the major factors in the perpetuation of stigma is the misperception among service members that seeking mental health treatment or receiving such treatment will cause harm to their careers or invite disapproval from the chain of command. While certain mental health conditions do pose a bar to deployment or continued service, most do not. A more accurate message is that untreated mental illness is much more of a threat to career progression and mission accomplishment than receiving effective mental health treatment, and that the act of seeking treatment is a sign of strength, not weakness. This approach, which emphasizes that treatment can help, rather than hurt, a career, can diminish the stigma associated with seeking mental healthcare.

Several Navy Medicine programs also have an anti-stigma component. The utilization of embedded mental health providers within operational units allows for the early identification and management of mental health issues, while reducing many of the barriers to seeking care. The Behavioral Health Integration Program (BHIP) employs a similar strategy by integrating behavioral health providers into primary care clinics. The early identification of mental health needs in a primary care environment serves to normalize mental health treatment as an essential part of healthcare, while increasing access and reducing the barriers to seeking care.

Question. The Department of Defense possesses one of the Nation's treasured institutions, the Uniformed Services University of the Health Sciences, which educates the next generation of Army, Air Force, Navy, and Public Health Service healthcare leaders and providers. I am interested in hearing the perspective of the Surgeons General regarding the value of the University and its graduates to the medical, nursing, and dental corps of the DOD and the Nation as a whole.

Can you offer some thoughts on the value that USUHS provides to the Military Health System and the Nation?

Answer. Navy Medicine values graduates from USUHS as an important pipeline for generating physicians and leaders. These graduates comprise a segment of all military physicians who understand the dynamic military environment and the diverse settings in which they will be expected to lead people and practice medicine. Developing that combination of valuable qualities cannot be accomplished with the same consistency and efficiency in the civilian sector. Having a core group of physicians with that training background provides an element of stability to the Military Health System. Overall, graduates from USUHS continue on active duty longer than graduates from other accession sources. As a result of higher continuation rates, USUHS-trained Navy physicians comprise a significant proportion of Navy Medicine leadership.

The value of USUHS extends to the entire Navy Medicine enterprise including Dental Corps (DC), Nurse Corps (NC), and the Medical Service Corps (MSC). The Naval Postgraduate Dental School is aligned academically with the Postgraduate Dental College (PDC) at USUHS. The PDC consists of the Army, Air Force, and Naval Postgraduate Dental Schools. In addition, USUHS has served as the platform for the three Services' dental schools to collaborate on efforts related to residency training and education. Specific areas of advancement include sharing best practices in resident education, Faculty development, Research support, Learning Resource Center services, and the elevation of academic excellence.

The USUHS Graduate School of Nursing (GSN) advanced practice graduates have a 99.9 percent certification pass rate and the GSN at USUHS is ranked 41st of over 400 nursing graduate schools in 2015 by U.S. News and World Reports. In addition, the Certified Registered Nurse Anesthetist program is consistently ranked as a top 10 National Program. The Navy MSC sends officers to USUHS for a comprehensive Clinical and Medical Psychology program, which is relied on by Navy Medicine to increase and sustain healthy mental health assets. MSC officers also attend USUHS programs for advanced training in Industrial Hygiene and Environmental Health, both of which greatly enhance readiness and force protection for the Navy and Marine Corps.

Question. I had a chance to speak with Secretary Mabus about what the Navy is doing to ensure we are focusing sufficient resources and attention to help sailors prepare for when they eventually separate so that they can put the strongest foot forward. I know the Navy has started to implement the DOD Military Life Cycle Transition Model so that we can be proactive with aligning civilian standards long before sailors intend to separate.

Can you please speak specifically to what the Navy is doing to align medical personnel training and certification to align with civilian standards to make it easier for these soldiers to eventually transition to civilian careers?

Answer. Our Hospital Corpsmen (both Active Duty and Reserve) can obtain certifications in more than 156 areas based on training and job skills at no cost to the Sailor and all funded by Navy Credentialing Opportunities Online (COOL). Since 2007, 4,340 Hospital Corpsmen have been funded for 6,486 certifications. In addition, I have issued Bureau of Medicine and Surgery Instruction 1500.23B—Institutional and Programmatic Accreditation of Medicine Department Enlisted Technical Education and Training which directs that all training taught by the Bureau of Medicine and Surgery will maintain program accreditation to ensure we are teaching to the highest standards and enabling Sailors to obtain certifications in those programs. There are also 20 programs of instruction at the joint Medical Education and Training Campus (METC) in San Antonio and all maintain program accreditation in their respective fields. This includes the Basic Medic Technician Corpsman

Program (HM A school) which maintains program accreditation in National Registry for Emergency Medical Technicians.

QUESTIONS SUBMITTED TO LIEUTENANT GENERAL THOMAS TRAVIS

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

Question. Please describe for the Committee the current and planned efforts to advance digital pathology practices in the Air Force Medical Service, and discuss the importance of having a robust digital pathology network.

Answer. Air Force Telepathology Systems are currently deployed at six Installations with consultation capability throughout the enterprise using whole slide imaging. These digital pathology systems are an integral part of the pathology practice and directly assist with the delivery of accurate diagnosis and treatment for our patient population and provide images where pathology specialists are located, saving shipping and consulting fees. Additionally we are able to consult with the Joint Pathology Center and Walter Reed National Military Medical Center providing access to more specialties. Once primary diagnosis approval is given by the Food and Drug Administration, the Air Force Medical Service will attain a robust digital pathology system and experience an annual savings of approximately \$5 million.

Funding is now available to complete deployment for the remaining five United States Air Force Medical Treatment Facilities with Pathology capabilities that need to be equipped with Digital Pathology Systems, which will complete the equipment rollout for the United States Air Force Regional Telepathology Program. The program is transitioning to Defense Health Agency Health Information Technology. The Air Force is the lead in enabling the other services and the Veterans Administration with the advancement of Telepathology.

Question. One of the recommendations of the Military Compensation and Retirement Modernization Committee is greater collaboration between the Department of Defense and Department of Veterans Affairs. How do you think the Department of Defense and the Department of Veterans Affairs can better work together to share patient workload among proximate facilities in order to maximize government resources and provide patients timely access to quality healthcare? Do you believe allowing the directors of medical centers to negotiate patient transfer agreements among themselves might be a good first step to increase collaboration?

Answer. The Department of Defense and the Department of Veterans Affairs are already working together to increase collaboration and share patient workload through efforts at the Health Executive Committee and many of its work groups. An example would be the efforts of the Joint Venture/Resource Sharing Work Group where medical facilities from both agencies in close proximity to each other are analyzed annually for potential sharing opportunities. Continued emphasis by the Service Surgeons General and the Department of Veterans Affairs leadership helps drive additional sharing. Also, continued Congressional interest in seeing that sharing is a priority along with continuation of the Joint Incentive Fund program will also keep the appropriate level of emphasis on the program and drive additional interest at the local level.

Yes, we agree that allowing the directors and commanders of medical facilities to negotiate agreements locally is a good first step in increasing collaboration. The Air Force Surgeon General encourages Medical Treatment Facility Commanders to share with the Department of Veteran Affairs medical facilities in their market area and as a result, more Air Force medical treatment facilities are entering into agreements or expanding their sharing opportunities with their Department of Veteran Affairs partners. The agreements are developed locally and then sent forward to higher headquarters for review and final approval. Limiting factors, however, will keep sharing to a minimum at some locations. Limiting factors include the Department of Veterans Affairs medical facilities lack of capacity to see additional patients due to inadequate staff or space, and the many Department of Defense ambulatory care centers that lack specialty care. Where capacity and need exist sharing agreements are locally negotiated and approved. The result was that in fiscal year 2014 Air Force medical treatment facilities saw over 70,000 veteran visits and admissions and that number is expected to increase in this fiscal year.

QUESTIONS SUBMITTED BY SENATOR RICHARD J. DURBIN

Question. A 2011 Department of Defense (DOD) study found that the prevalence of smoking is higher in the military (24 percent) than the general adult population (20 percent), and that the availability of cigarettes on military installations made

it easier to smoke. A 2008 Department of Defense (DOD) study found that almost one in three military smokers began doing so after enlisting. Service members who use tobacco are more likely to drop out of basic training, and sustain injuries. In 2008, smoking among active-duty members cost the Department more than \$1.6 billion annually in smoking-related medical care, increased hospitalization, and lost days of work. In addition, the Navy is actively looking at banning tobacco sales on ships and bases, and the other services are considering it. Last year, this committee ended the taxpayer subsidy on tobacco sold at military commissaries.

Do each of you agree that smoking has an adverse impact on service members' health and on individual military readiness?

Answer. Yes. The Air Force concurs with the Institute of Medicine's 2009 report *Combating Tobacco Use in Military and Veteran Populations*, which detailed the numerous adverse effects of tobacco use on health and military readiness. Adverse health effects include premature death, cancer, cardiovascular disease, emphysema, asthma, reproductive health problems, oral disease—among many well-documented effects. Lesser appreciated is that tobacco use also causes military-relevant health problems which impacts mission performance, such as impaired physical endurance; decreased night vision; hearing loss; impaired cognitive function from nicotine withdrawal; increased risk of motor vehicle accidents; increased work absenteeism; increased risk of lower respiratory infections; impaired wound healing; increased post-operative complications; and higher risk of periodontal disease (Box 2-1, page 50, IOM Report).

Question. Reducing tobacco use in the military would seem to be a win-win. Not only would it save lives, but it would also improve short-term readiness and save each service annual tobacco-related healthcare costs. Are the Surgeons General pursuing specific actions to curb tobacco use?

Answer. The Air Force is committed to advancing Comprehensive Airman Fitness, of which Tobacco Free Living is a critical component. In March 2015, we updated Air Force Instruction (AFI) 40-102, Tobacco Free Living, which reinforces Air Force commitment to Tobacco Free Living: "Tobacco use degrades Air Force readiness, health, and leads to preventable healthcare costs. The Air Force discourages the use of all tobacco products" (Chapter 1). The updated AFI further advances tobacco-free environments, which Centers for Disease Control and Prevention considers a best practice in a comprehensive tobacco control program, by prohibiting tobacco use in installation recreation facilities including but not limited to athletic fields, running tracks, basketball courts, beaches, marinas, and parks, except in designated tobacco areas. The AFI reinforces that medical campuses are 100 percent tobacco-free. It prohibits special events in Services' facilities that promote tobacco use, such as "Cigar Night". The Air Force is committed to continuing to lead DOD in promoting Tobacco Free Living. As evidence of our progress, smoking prevalence among Airmen has declined 43 percent from 19.7 percent in 2008 to 11.3 percent in 2014.

Question. There are indications that the real cost of tobacco may be higher than the \$1.6 billion estimated in the 2008 study. Does the panel believe it would be useful for Congress to direct an updated study, which can also assess the impact of policy changes such as eliminating the subsidy for tobacco and the ban on smoking on submarines?

Answer. Yes. A study by Centers for Disease Control researchers last year (*Am J Prev Med* 2015; 48:326-33) found that smoking is responsible for 9 percent of healthcare costs and costs \$170 billion annually in the United States. More than 60 percent of the costs associated with smoking are borne by Federal health programs. In addition, smoking exceeds 30 percent of total health expenditures in non-Medicare, non-Medicaid Federal programs, such as TRICARE and Veterans Affairs. Extrapolating these updated figures to the Department of Defense's \$50 billion Unified Medical Program would suggest that tobacco may cost \$4.5 billion or higher in preventable healthcare costs, not including economic losses from lost productivity. Updated economic analyses of tobacco's impact on the military will help communicate the imperative to take action on tobacco, and quantify the healthcare savings that will accrue from more aggressive tobacco control in the Department of Defense.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question. DOD's medical mission is critical to our national defense and ensuring the health of the all-volunteer force. We have an important responsibility to protect the health and well-being of all of those in the DOD's care—servicemen, women, civilians, and their families. Our responsibility to provide that care extends to those who are deployed and to those at home. One of the challenges that DOD is continuing to grapple with is promoting access to mental health. I know the Depart-

ment is working hard to reduce and eventually eliminate the stigma associated with mental health treatment so that more servicemen and women will avail themselves of the programs that have been setup to help them confront the trauma and stresses of war. In my view, eliminating this stigma is critical to giving servicemembers and deployed civilians the resolve they need to take advantage of the care they need to become whole again, and there is still work that needs to be done.

Can you give me your views on what you see are the major hurdles to eliminating the stigma associated with mental health treatment, and how this budget request programs funds to help overcome those hurdles?

Answer. The Air Force is working diligently to reduce the perception of stigma associated with mental healthcare. We are making progress. Every year increasing numbers of Airmen seek care. However, many Airmen still avoid mental healthcare because they are embarrassed, or unsure it will be helpful, or because they fear it may hurt their career. Thus, the primary hurdle is communication: convincing Airmen that treatment is a sign of strength, that it is effective, and that seeking care early can save careers. The requested budget allows the Air Force to continue to fund programs aimed at educating Airmen about these benefits of early help-seeking. This message is carried in programs such as our newly revised Suicide Prevention training, Frontline Supervisor Training, and in organizational activities like Wingman Days. A second approach is to bring care closer to the individual in settings that are easier to access. Our integration of mental health providers into primary care clinics and the embedding of mental health providers into operations units are two programs that are examples of that approach.

Question. The Department of Defense possesses one of the Nation's treasured institutions, the Uniformed Services University of the Health Sciences, which educates the next generation of Army, Air Force, Navy, and Public Health Service healthcare leaders and providers. I am interested in hearing the perspective of the Surgeons General regarding the value of the University and its graduates to the medical, nursing, and dental corps of the DOD and the Nation as a whole. I understand that you are a graduate of the university.

Can you offer some thoughts on the value that USUHS provides to the Military Health System and the Nation?

Answer. The real strength of the Uniformed Services University of the Health Sciences (USUHS) is in the creation of future medical leaders, similar to what occurs at the service academies. The USUHS educational experience, coupled with a 7 year active duty service commitment, breeds a medical officer dedicated to the Military Health System (MHS) and its continued improvement. The graduates of USUHS perpetuate a culture of service that has lasting implications for the Military Health System and our Nation. As a testament, graduating a minority of new Air Force physicians, 16 percent, each year, greater than 33 percent of physician program directors, medical directors, commanders and Air Force Medical Service senior Medical Corps leaders are USUHS graduates.

USUHS provides an opportunity for dental and medical students from the Army, Navy, and Air Force to take classes together and create lifelong relationships. These relationships provide a lasting network for collaboration and are crucial to both in-garrison and deployed joint environment mission success.

USUHS does more than produce medical doctors, dentists, advance practice nurse clinicians, scholars and scientists. USUHS prepares its alumni to function within military treatment facilities, but also to immediately deploy under austere/combat conditions and provide disaster and humanitarian assistance. These graduates are prepared to lead and practice in the unique military and Federal environments, while contributing to cutting edge research in support of force protection, military readiness and humanitarian intervention in our Nation's Federal health systems. The graduates of USUHS have a 99.9 percent national board certification pass rate and are fully prepared to perform in a joint environment in any military setting upon graduation; compared to an additional 3-9 month post-graduation residency period required for graduates from civilian institutions.

The Graduate School of Nursing (GSN), has the unique ability and agility to stand-up new academic clinical programs within 12 months (i.e., psychiatric mental health and women's health practitioner programs) in response to Services' requests.

USUHS is hosting the Federal Services Dental Educators Workshop this year with a focus on expanding distance learning opportunities, residency program resource sharing, dental simulation training and opportunities for inter-professional education in Health Care. The faculty has also been invited to participate in working groups bringing a dental perspective to healthcare initiatives in Global Health and Inter-professional Education.

Preventive dentistry and force health protection are key facets of all the affiliated programs. Dental residents are imbued with the importance of the dental readiness

mission. Military Dentistry helps to ensure that the line force is “medically” prepared for deployment.

USUHS is considered the “gold standard” for providing world class medical education. They prepare military medics to successfully execute the mission of the Department of Defense by providing world class medical education with a military unique curriculum. USUHS is accredited by 22 professional/specialized civilian entities.

Question. Can you please speak specifically to what the Air Force is doing to align medical personnel training and certification to align with civilian standards to make it easier for these airmen and women to eventually transition to civilian careers?

Answer. The Department of Defense (DOD) has partnered with the National Council of State Boards of Nursing as a step toward promoting the development of bridge programs for current and former military Medics and Corpsman seeking civilian careers in Nursing.

Additionally, the DOD has also been engaged with the Department of Labor and the National Governors’ Association to design and implement a licensing and certification demonstration to create accelerated career pathways for Service members and Veterans in selected civilian occupations.

Entry level DOD medics are trained at the Medical Education and Training Campus (METC), in San Antonio, TX. METC maintains programmatic accreditation for 17 of its training programs and offers academic credit for all METC courses. In response to increasing civilian healthcare standards METC is working a pilot to establish degree requirements for 4 specific medical training courses.

The Enlisted to Medical Degree Preparatory Program (EMDP2) is a partnership between the Uniformed Services University and Health Sciences (USUHS) and the Armed Services. This program provides academically promising enlisted Service members an opportunity to complete the necessary coursework required to apply for medical school while remaining on active duty.

The Health Resources and Services Administration (HRSA) partnered with the American Hospital Association and developed a toolkit that provides guidance for hospital leaders on hiring Veterans in Advanced Medical Operations, specifically qualified as licensed practical nurses, registered nurses, nurse practitioners and physician assistants. The HRSA also encourages physician assistance programs to propose strategies to recruit, mentor and retain veterans within the funding opportunities. The HRSA’s National Health Service Corps (NHSC) offers virtual job fairs in an on-line version of traditional job fairs; connecting qualified job seeking health professionals with NHSC-approved sites with open job opportunities.

The Veterans’ to Bachelor of Science Degree in Nursing Program (VBSN) was designed to increase enrollment, progression and graduation of Veterans from baccalaureate nursing programs. In 2014 HRSA funded 11 new Schools of Nursing in addition to the 9 continuing awarded Schools of Nursing with VBSN grants for a total of 20 projects. These grant projects helped by providing a means of awarding academic credit for prior military healthcare training, a means to assess clinical competencies, provide mentorship and other support systems which will equip Veterans to graduate and pass National Council Licensure Examination.

The Department of Veterans Affairs (VA) has concluded a pilot that involved assigning Veterans with military experience as medics and corpsmen as intermediate care technicians (ICTs) in VA hospitals and clinics. The Indian Health Service (IHS) and the VA are now developing a Memorandum of Understanding that calls for IHS to hire a specific number of ICTs by 2016.

The Air Force provides funding through an established process designed to increase accountability and better manage costs for its personnel to attend civilian conferences ensuring mission critical training. Air Force military training facilities also maintain and pursue needed training affiliation agreements that allow for its personnel to obtain initial/proficiency training in civilian institutions that are accredited by State or nationally recognized entities.

QUESTIONS SUBMITTED TO CHRISTOPHER A. MILLER

QUESTION SUBMITTED BY SENATOR THAD COCHRAN

Question. Regardless of what new solution is ultimately chosen as the DOD EHR, the current inpatient electronic health record, Essentris, is going to be utilized by MHS clinicians until 2022. Is there an adequate, formal program in place, with clear guidelines for current technology providers that would allow the current system to have the advantage of enhanced technologies? Are you aware of enhancements to the existing system that could be deployed that would improve interoperability be-

tween MTFs and provide a clinician the ability to access any active or archived patient record around the world? Are there currently any limitations in law, policy memorandums, or internal policies that would limit the ability of the program manager to initiate or work with current providers to allow enhancement of current capabilities? Are there any funds available within the Department of Defense for the enhancement and evolution of capabilities in the interim period between now and the time when DHMSM achieves IOC of its procured EHR?

Answer. Mr. Miller's area of expertise is the acquisition of a commercial-off-the-shelf (COTS) Enterprise Electronic Health Record system, and this question is out of his purview. However, to address the Senator's question, we asked our colleagues in the Office of the Under Secretary of Defense for Personnel & Readiness for assistance, and their response follows:

DOD's acquisition guidelines allow for the evaluation of enhanced technologies when a need is identified, prioritized through governance, and then funded. DOD's maintenance of its current EHR system (to include Essentris) is critical for continuity of healthcare delivery and operations until DHMS reaches full operational capability with the new EHR. However, Essentris is maintained as a legacy system under a sustainment contract using sustainment funds; as such, DOD is limited to making changes related to identified patient safety issues or changes in support of prioritized (and funded) System Change Requests that are processed through governance.

There are no planned enhancements to Essentris. Steps to improve interoperability have been taken since DOD achieved implementation of Essentris in April 2011. As of November 2014, DOD improved Essentris' ability to interface at each site, allowing for cross-site access to better support real-time inpatient record access and documentation.

There are no legal or policy limits on enhancing legacy health IT systems. If Essentris were to be modernized and/or upgraded, DOD would still need to fund the costs associated with training its users on these upgrades or enhancements, provide for integration testing (Essentris interfaces with several other DOD systems), ensure DOD Information Assurance requirements are met, and fund the annual maintenance costs associated with all new hardware.

Essentris sustainment funding covers license costs and software maintenance; it does not include development funds for system enhancements. Any proposed enhancements would need to be approved and funded through the governance process. Such enhancements would be outside the scope of the Essentris sustainment contract and would involve procurement through a different contract.

QUESTION SUBMITTED BY SENATOR ROY BLUNT

Question. The Department of Defense (DOD) and the National Institutes of Health (NIH) are successfully partnering to create the world's first human brain tissue repository for military personnel. However, it is my understanding that scientific researchers are having issues accessing post-mortem tissues from service members affected by blast injury and that there are significant hurdles to gaining access to these invaluable resources. Therefore, could you provide the Committee with specific strategies for overcoming roadblocks to post-mortem brain donation in the military, including consent issues that are preventing access? How many brains are currently in the brain tissue repository for military personnel?

Answer. Mr. Miller's area of expertise is the acquisition of a commercial-off-the-shelf (COTS) Enterprise Electronic Health Record system, and this question is out of his purview. However, to address the Senator's question, we asked our colleagues in the Office of the Under Secretary of Defense for Personnel & Readiness for assistance, and their response follows:

The Department of Defense (DOD) has initiated a comprehensive review of the process of obtaining brain specimens from deceased Service members to better understand the devastating condition of Traumatic Brain Injury. The Department plans to send the report to Congress, required by Senate Report 113-211 on the Brain Tissue Repository, in June, 2015.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question. I would like to discuss DOD's engagement around global health. In West Africa, we saw the effects that weak health systems abroad have on our national security and the implications that it has for DOD's mission. I think it is important that DOD is working in support of the President's Global Health Security Agenda to promote global health as an international security priority. For you—for the Mili-

tary Health System—that means meeting the Combatant Commanders’ requirements to work with partners and allies to build their capacity to manage and respond to local health challenges, and promote regional stability by increasing access to basic health services. I am supportive of those efforts. In my view, an ounce of prevention is worth a pound of cure. But I wonder if we can get more out of our engagements by being more selective about where we put our resources.

Can you describe how DOD measures its return on investment for every dollar spent on global health engagement?

Answer. Mr. Miller’s area of expertise is the acquisition of a commercial-off-the-shelf (COTS) Enterprise Electronic Health Record system, and this question is out of his purview. However, to address the Senator’s question, we asked our colleagues in the Office of the Under Secretary of Defense for Personnel & Readiness for assistance, and their response follows:

This is a work in progress. The Assistant Secretary of Defense for Health Affairs funded a 2-year effort at the Uniformed Services University of the Health Sciences (USUHS), called the Measures Of Effectiveness in Defense Engagement and Learning (MODEL), to determine the value of Global Health Engagement (GHE) activities and to better inform future investments. MODEL’s econometric methodology facilitates the ability to ask hypothesis-driven “if then” questions, using existing DOD sources like the Overseas Humanitarian Shared Information System and the Theater Security Management Information System to test relationships between GHE and desired strategic end-states. We believe that MODEL has demonstrated the potential to help inform future GHE investments.

In addition to funding the MODEL program, the Assistant Secretary of Defense for Health Affairs recently funded a research study to validate and refine what we currently believe are “best practices” in planning and executing GHE activities. A new interdisciplinary Center for Global Health Engagement and Department of Global Health at USUHS will oversee these efforts.

Question. Are there specific metrics that DOD uses to inform how it develops its global health engagement strategy?

Answer. Mr. Miller’s area of expertise is the acquisition of a commercial-off-the-shelf (COTS) Enterprise Electronic Health Record system, and this question is out of his purview. However, to address the Senator’s question, we asked our colleagues in the Office of the Under Secretary of Defense for Personnel & Readiness for assistance, and their response follows:

Global Health Engagement (GHE) is not a single line of effort but rather a diverse set of activities derived from and conducted in support of many distinct programs, each of which is funded by specific appropriations, under the oversight of one of four Assistant Secretaries of Defense. These activities fall into three broad areas: force health protection and readiness, medical stability operations and partnership engagement, and threat reduction. Collectively, the activities are valuable “tools” within the geographic combatant command theater campaign plans as a means to partner with host nations to achieve security cooperation and improve partner nation health system capabilities and capacities, while simultaneously promoting, mutual interoperability, regional stability, and improved strategic access for the United States Government into these nations.

With respect to specific metrics, the Measures Of Effectiveness in Defense Engagement and Learning (MODEL) has begun to work with geographic combatant commands to pilot the use of appropriate strategic, health, and readiness metrics for major GHE activities. Examples of metrics that have been tested include the State Fragility Index (to test overall impact of GHE) and Disability Adjusted Life Years (to test the impact of the Defense HIV AIDS Prevention Program).

The State Fragility Index includes weighted measures including Security Effectiveness, Security Legitimacy, Political Effectiveness, Political Legitimacy, Economic Effectiveness, Economic Legitimacy, Social Effectiveness, and Social Legitimacy. The Effectiveness Measures produce an Effective Score and Legitimacy Measures are summed into a Legitimacy Score. Combining both scores yields the State Fragility Index. MODEL uses the State Fragility Index as a measure of effectiveness against which DOD GHE level of effort is measured. In other words, as DOD does more GHE, partner nations become less fragile.

The Disability Adjusted Life Year (DALY) for HIV/AIDS is the sum of years of life lost and the years lost due to disability for people living with HIV/AIDS. MODEL uses HIV DALY as a measure of effectiveness against which DOD GHE level of effort is measured. In other words, as DOD does more GHE, partner nations will have fewer years of life lost and fewer years lost due to disability associated with HIV/AIDS.

Question. I want to ask about the Pacific Joint Information Technology Center on Maui. This is an important program that supports DOD medical readiness through

rapid prototyping and advanced concept development that directly serves PACOM's requirements and the warfighter. I understand it is also involved in supporting information sharing between DOD and the VA. The President's fiscal year 2016 budget request realigns some of the funding from the research and development account to operations and maintenance to support the ongoing activities at the Pacific JIITC.

Can you please explain the importance of the Pacific JIITC to our mission in the Pacific?

Answer. Mr. Miller's area of expertise is the acquisition of a commercial-off-the-shelf (COTS) Enterprise Electronic Health Record system, and this question is out of his purview. However, to address the Senator's question, we asked our colleagues in the Office of the Under Secretary of Defense for Personnel & Readiness for assistance, and their response follows:

The Pacific Joint Information Technology Center (Pacific JIITC) is the Military Health System's (MHS) research center for joint concept technology development, prototyping, and piloting of information management and information technology (IT) products and services to support Department of Defense (DOD) medical readiness requirements and IT modernization needs across the continuum of care. Based in Maui, Hawaii, the mission of Pacific JIITC is to rapidly research, test and develop warfighter medical solutions and products through pilots or prototypes that provide mission critical value and actionable information to DOD, including the Services, Combatant Commanders, and the Department of Veterans Affairs (VA). Pacific JIITC provides services for early-stage research and development. Early piloting allows MHS to be agile and flexible in determining what IT solution is best, most cost effective and acceptable to the functional community before a major acquisition is launched.

Pacific JIITC includes an Integrated Test and Evaluation Center (ITEC) and Bio-Technology Hui. Located in Kihei, Hawaii, ITEC is the first DOD/VA integrated lab to virtualize critical legacy systems. ITEC provides an agile computing environment that supports military health and interagency research and development, testing, and evaluation missions. ITEC offers a state-of-the-art development environment to test interagency ideas and prototypes, and facilitates innovation through grants and challenges. ITEC incorporates virtual sandboxes, creating a tightly controlled environment to run guest programs, and facilitate Federal, private and public participation. The Biotechnology Hui, which moved to Pacific JIITC in 2011, supports applied research, development and deployment of telehealth and biotechnology to improve access and the quality of care to active duty military families and impacted communities. Research areas include sensor technologies, regenerative medicine, DOD/VA health information systems interoperability, and dual use technologies.

Question. Can you please explain how the funds that are being realigned to the operations and maintenance account will be used to support the program's mission?

Answer. The reprogramming of fiscal year 2015 funds from RDT&E and PROC to O&M has been requested to correctly align appropriations and funding levels based on an evaluation of aligning the VA and DOD's data exchange efforts with each Department's current EHR program strategy. Fiscal year 2015 funding appropriated for the Defense Medical Information Exchange (DMIX) program was based on the initial plan for the integrated Electronic Health Record (iEHR) program developed in 2013. This plan included developing substantial IT capabilities for the exchange of healthcare data between Department of Defense (DOD), Department of Veterans Affairs (VA), and private sector care providers, as mandated by the National Defense Authorization Act, 2014. Over the past year as DOD worked with private industry to develop the new Request for Proposals, DOD refined the DMIX needs and performed a detailed technical and cost review of its existing data exchange systems and determined that streamlining existing systems would increase data exchange capacity, cost less and provide capabilities sooner. Based on this detailed technical and cost review, the program expects to return more than \$16 million to higher Defense priorities.

The majority of the O&M funding will be used to pay for hosting services, license maintenance and leases necessary for the data exchanges. The current data exchange capabilities were inherited initiatives from another DHA (Defense Health Agency) IT program which had been patched and expanded to try and meet current requirements. After evaluation of the multiple data exchange capabilities that the DMIX program inherited, a strategy was developed to meet the interoperability requirements mandated by the fiscal year 2014 NDAA. One of the key activities is to streamline the number of data exchange capabilities. The strategy also includes increasing the number of partners exchanging health data by increasing the number of DOD and VA users and onboarding additional private eHealth Exchange partners. Both of these capabilities rely on the data exchange capability in order to collect the appropriate patient health data to be displayed in a manner that can be

read by healthcare providers from both Departments and private eHealth Exchange partners. With the increase of eHealth Exchange partners and number of Department users, there is a need for additional hosting services and licenses to support the increased user capacity.

DMIX architecture will also enable the VA interface to exchange health data from the DOD's Healthcare Management System Modernization (DHMSM) initiative and enable integration testing with current legacy healthcare data. The DMIX data exchange capability will bridge the gap between the legacy EHR systems and the DHMSM system once it goes into production, and it will continue to be used by DOD as it transitions from the legacy EHR systems to a modernized EHR. The DMIX interface is a crucial part of DHMSM's strategy to meet their initial operational capability (IOC).

SUBCOMMITTEE RECESS

Senator COCHRAN. We will reconvene on Wednesday, April 15, at 10:30 a.m. to receive testimony from the Director of National Intelligence and Under Secretary of Defense for Intelligence.

Until then, the subcommittee stands in recess.

[Whereupon, at 10:17 a.m., Wednesday, March 25, the subcommittee was recessed, to reconvene at 10:30 a.m., Wednesday, April 15.]