

**DEPARTMENT OF DEFENSE APPROPRIATIONS
FOR FISCAL YEAR 2018**

WEDNESDAY, MARCH 29, 2017

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

The subcommittee met at 10:30 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Thad Cochran (chairman) presiding. Present: Senators Cochran, Shelby, Murkowski, Blunt, Daines, Moran, Durbin, Murray, Tester, and Schatz.

DEPARTMENT OF DEFENSE

DEFENSE HEALTH PROGRAM AND MILITARY MEDICINE

**STATEMENT OF LIEUTENANT GENERAL NADJA Y. WEST, SURGEON
GENERAL AND COMMANDING GENERAL, UNITED STATES ARMY
MEDICAL COMMAND**

OPENING STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Good morning. The subcommittee will come to order. Today, we are receiving testimony on the Military Health System and the medical readiness of our servicemembers.

We are pleased to welcome to the hearing Lieutenant General Nadja West, Surgeon General of the Army, Vice Admiral Forrest Faison, Surgeon General of the Navy, Lieutenant General Mark Ediger, Surgeon General of the Air Force, and Ms. Stacy Cummings, Program Executive Officer of the Defense Healthcare Management Systems.

Our military has made great strides in areas ranging from medical research breakthroughs to expedited treatment and medical evacuations off the battlefield. We are particularly proud of the work performed by the 81st Medical Group flying out of Keesler Air Force Base. Guess where that is? Biloxi, Mississippi.

This morning, the committee would like to learn more about the Department's progress on implementing the new electronic health record system and its integration with the Department of Veterans Affairs and private healthcare providers. That is a big challenge right there in one sentence.

We are aware the Department began deployment of its new electronic health record system in February at Fairchild Air Force Base in Washington. The committee looks forward to hearing about the success of this program thus far, and understanding its future challenges.

We appreciate you being here with our committee, and your preparation of prepared statements, which will be included in the record.

We applaud your efforts to increase medical readiness and provide quality healthcare to our servicemembers, their families, and military retirees.

[The statement follows:]

PREPARED STATEMENT OF SENATOR THAD COCHRAN

Good morning, the subcommittee will come to order. Today, we are receiving testimony on the military health system and the medical readiness of our servicemembers. We are pleased to welcome Lieutenant General Nadja West, Surgeon General of the Army; Vice Admiral Forrest Faison, Surgeon General of the Navy; Lieutenant General Mark Ediger, Surgeon General of the Air Force; and Ms. Stacy Cummings, Program Executive Officer of the Defense Healthcare Management Systems.

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We are aware the Department began deployment of its new electronic health record system in February at Fairchild Air Force Base in Washington. The Committee looks forward to hearing about the success of this program thus far, and to understanding its future challenges.

We appreciate your testimony today and applaud your efforts to increase medical readiness and provide quality healthcare to our service members, their families, and military retirees.

Now I turn to the Vice Chairman, Senator Durbin, for his opening remarks.

Senator COCHRAN. I now turn to the distinguished Vice Chairman, Senator Durbin, for his opening remarks.

STATEMENT OF SENATOR RICHARD J. DURBIN

Senator DURBIN. Thanks, Mr. Chairman. I am pleased to join you in welcoming our witnesses to our hearing on the Department of Defense Health Programs.

DOD (Department of Defense) health readiness is a critical part of our overall readiness. There can be no doubt that the most valuable resource in our military is the men and women who serve. They make a tremendous sacrifice. Our job is to ensure that DOD and the Services are resourced to meet the medical needs of our Service men and women, at home and while they are deployed.

This includes facilities, technology, agility to respond quickly to a wide array of contingencies, but the goal is always the same. Before the men and women of the Armed Forces can fight for this country, they must be fit to deploy.

From the outlines of its fiscal year 2018 budget, the new Administration is very concerned about augmenting the hard power of our military. Let us not lose sight of the soft power resources that are also critically important.

In recent years, we have seen the use of defense health care around the world to great effect. It is reflected in many ways, from rushing doctors, nurses, and medics to far away countries suffering from natural disasters, to smaller engagements with friendly countries to increase their medical capacity. We need to remember this as we receive and consider the fiscal year 2018 budget.

While we often hear about the challenges in the Military Health System, I believe we also need to celebrate today its successes. Chief among these is the fact that our combat survival rate for American forces has never been higher. That speaks to the innovation in each of the Services to meet the evolving challenges of the battlefield.

It also means we must continue research in fields such as combat casualty care and infectious disease. As you know, DOD medical research is one of my top priorities.

With Chairman Cochran's great support, and my Senate colleagues as well, we have increased research funding over 32 percent over the last 4 years. This is important because as more of our soldiers, sailors, marines, and airmen survive their injuries, their needs from the Military Health System have been evolving.

The funding Congress adds each year to the defense bill includes support for a range of medical research, from modern prosthetics to more effective treatments for traumatic brain injury.

My colleague, Tammy Duckworth, a new Senator from Illinois, who served this country so well, brought home the scars of war, and she has been a frequent beneficiary of the good research that has been done on prosthetic devices. It is nothing short of amazing what she has been able to do to recover and become a full member of the United States Senate.

Breakthroughs in these fields are improving the quality of life of our servicemembers after the fight, which is part of our responsibility as well.

Let me bring up an issue where I think we can do better. Overall individual health is a key component of military readiness. This includes encouraging healthy lifestyles that reduce missed time due to illness and injury while promoting faster recuperation.

Further curbing the use of tobacco in the military is a prime way to accomplish these goals, and one of my top priorities. We have realized that across the healthcare systems of America. I do not see that reflected in the Department of Defense policy, and I will ask specific questions.

It saves money. Ensures a healthy force, but it is frustrating to hear that bureaucratic red tape is holding back progress on this tobacco issue. I would like to hear from the Surgeon Generals about their ongoing efforts to reduce tobacco use.

We have a lot to discuss, including proposed significant changes to the Military Health System, TRICARE, and the roll out of new electronic healthcare records.

I want to thank each and every one of you for your service to our country and your efforts to better the lives of the personnel we have entrusted to your care. It is an essential part of maintaining a ready force.

Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF SENATOR RICHARD J. DURBIN

Mr. Chairman, I am pleased to join you in welcoming our witnesses to our hearing on the Department of Defense health programs.

HEALTH READINESS

DoD health readiness is a critical part of our overall readiness posture. There can be no doubt that our most valuable resource is our military personnel—the men and women that make tremendous sacrifices to keep us safe.

Our job is to ensure that the DoD and the Services are resourced to meet the medical needs of our servicemen and women at home and while deployed.

This includes the facilities, technology and agility to respond quickly to a wide-array of contingencies, but the goal remains the same: before the women and men of the Armed Forces can fight for this country, they must be fit to deploy.

HARD AND SOFT POWER

From the outlines of its fiscal year 2018 budget, the new administration is very concerned about augmenting the “hard power” of our military.

We must not lose sight of the fact that the DoD has its own “soft” power resources that are also very effective. In recent years we have seen the use of defense healthcare around the world to great effect. This is reflected in many ways: from rushing doctors, nurses, and medics to faraway countries that have suffered from natural disasters, to smaller engagements with friendly countries to increase their own medical capabilities and build goodwill.

We need to remember this as we receive and consider the fiscal year 2018 budget.

MEDICAL RESEARCH

While we often hear about challenges in the Military Health System, I believe we also need to celebrate its successes. Chief among these is the fact that our combat survival rate has never been higher. That speaks to the innovation in each of the Services to meet the evolving challenges of battlefield medicine. It also means that we must continue research in fields such as combat casualty care and infectious diseases.

As you know, DoD medical research is a top priority of mine. With Chairman Cochran’s great support and that of our Senate colleagues, we have increased research funding over 32 percent over the last 4 years. This is important because as more of our soldiers, sailors, marines and airmen survive their injuries, many times their needs from the Military Health System will evolve.

The funding Congress adds each year to the defense bill includes support for a range of medical research, from modern prosthetics to more effective treatments for traumatic brain injury. Breakthroughs in these fields are improving the quality of life of our service members after the fight, which is part of our Nation’s responsibility to our servicemen and women.

TOBACCO

Of course, overall individual health is a key component of military readiness. This includes encouraging healthy lifestyles that reduce missed time due to illness and injury while promoting faster recuperation times.

Further curbing the use of tobacco in the military is a prime way to accomplish these goals and a top priority of mine. It saves money and ensures a healthier force, but it is frustrating to hear that bureaucratic red tape is holding back progress on this critical issue.

I would like to hear from the Surgeons General about ongoing efforts to reduce tobacco use, and what steps are needed to make more progress now.

CONCLUSION

We have a lot to discuss, including proposed significant changes to the Military Health System and TRICARE, and the roll out of the new electronic health record that seems to show great promise.

Thank you for your service and for your work to better the lives of the personnel entrusted to your care. It is an essential part of maintaining a ready force.

Senator COCHRAN. Thank you. We are pleased to welcome our distinguished witnesses who are here at our hearing, Lieutenant General Nadja West, Surgeon General of the Army, Vice Admiral Forrest Faison, Surgeon General of the Navy, Lieutenant General Mark Ediger, Surgeon General of the Air Force, and Ms. Stacy Cummings, Program Executive Officer of the Defense Healthcare Management Systems.

I am going to defer my opening statement and go right to recognition of this panel for any statements they wish to make. We will proceed with questions after that.

First, Lieutenant General Nadja West, Surgeon General of the Army.

SUMMARY STATEMENT OF LIEUTENANT GENERAL NADJA WEST

General WEST. Good morning, Chairman Cochran, Vice Chairman Durbin, and distinguished members of the subcommittee. Thank you so much for the opportunity to highlight the important work Army Medicine does in support of our Nation.

I am extremely proud to lead the dedicated professionals of the Army Medicine team. On behalf of these professionals, I would like to thank Congress for the continued support in all that we do.

I would also like to recognize America's sons and daughters that are currently forward stationed or deployed around the world. As you mentioned, Mr. Durbin, they are the reason why Army Medicine and the entire Joint Health Services Enterprise exist.

As we continue to be the Nation's premier expeditionary and globally integrated medical force, readiness without question remains my number one priority. Predictable and consistent funding is essential to ensure we maintain our readiness to support and answer our Nation's call.

It is important to emphasize that Army Medicine is comprised of a mix of integrated health services, research, training, and education unlike any other healthcare organization in the world. From our garrisons to the farthest sites around the globe, Army Medicine provides quality health care when needed.

When assessed against nationally accepted quality benchmarks for healthcare, our performance, along with that of our Navy and Air Force colleagues, meets or exceeds our Nation's top performing civilian systems. We also maintain these standards while sustaining readiness and engaging in and supporting operational missions, a mission set our civilian counterparts do not have.

Still, we are consistently working to improve, to increase access, to decrease unnecessary variability, and to enhance patient experience. I assure you that Army Medicine has been listening and responding.

Over the last year, we have launched aggressive efforts to expand access to improved quality for all who rely on us. Last year when I testified before this committee, I promised that I would create 379,000 additional primary and specialty care appointments, and I am very proud to share with you that we have exceeded that goal by more than 200 percent, adding 836,000 additional appointments in 2016.

By far, our most promising initiative to bring care closer to our patients is Virtual Health. Army Medicine is recognized as a leader in Virtual Health with services spanning 30 countries and territories, over 30 clinical specialties, and the potential uses are far reaching, from remotely monitoring patient vitals to providing virtual consultations, to a medic actually providing combat casualty care or treating a combat casualty.

We see Virtual Health as a means to evolutionize access, whether in garrison facilities, at our patient's home, or at the point of injury.

Remarkable advances have also been made in preventing and treating infectious diseases, such as the Zika virus, as well as treating physical and mental combat related wounds.

The importance of sustained and predictable funding is paramount to continuing our medical research that saves lives, decreases morbidity, and improves quality of life.

In anticipation of future challenges, Army Medicine today is preparing for our tomorrow. Capabilities required to support the future operating environment are going to look much different than they do today. The emergence of peer and near peer adversaries combined with rapid technological expansion threatens the current construct of battlefield medical support.

In a multi-domain battle environment, we may not have uninterrupted air superiority, which will impact our ability to conduct on demand patient evacuation, and our medics and other early responders may find themselves providing complex prolonged field care.

The best support of our Joint Force—to be able to support our Joint Force, we need to be able to rapidly scale and reconfigure our capabilities. For example, last year Army Medicine rapidly assembled a damage control surgical capability to support forces operating in a widely-dispersed environment within the U.S. Africa Command area of responsibility.

Retaining this agility is key as we continue to work with our colleagues to implement the 2017 NDAA (National Defense Authorization Act). Readiness is foremost, and we must maintain the ability to flex with our service to provide the right capability while continuing to meet or exceed national quality care standards in our garrison environments. This is our sacred trust with our Nation.

In closing, lessons learned over the past 15 years have changed how care is delivered on the battlefield and at home. These outcomes, lives saved, and advancements do not happen by chance. They are a product of a thoughtfully organized, tested and proven assemblance of medical treatment facilities, research labs, and training and education campuses, similar to those that exist in the Navy and Air Force components of our health enterprise.

They are also the result of an integrated, well synchronized plan, but we cannot be satisfied with the past successes. We must remain vigilant, for if we do not, as my Chief, General Milley, says, we will pay the price in the blood of our injured.

So, our readiness to support our Nation and our Army can never and will never be in doubt. So, thank you for your continued support to our soldiers, to our Army, and to Army Medicine.

[The statement follows:]

PREPARED STATEMENT OF GENERAL NADJA Y. WEST

Chairman Cochran, Ranking Member Durbin, distinguished members of the subcommittee, thank you for the opportunity to testify on the current state of Army Medicine and future challenges. Your continued support enables Army Medicine to remain ready and responsive to global threats and other uncertainties. It has been a privilege to serve as The Army Surgeon General and Commanding General of US Army Medical Command, and I am incredibly proud to lead a team of talented and

dedicated professionals. Every individual that makes up our Army Medicine team remains our most valuable asset and we have a sacred obligation to care for those who serve our Nation and their families.

Army Medicine is part of an integrated Joint Health Services Enterprise (JHSE), which is globally engaged, supporting Combatant Commanders in 140 locations across five continents. We continue to provide medical support to our Forces engaged in conflict across the globe while concurrently responding to natural disasters, infectious disease outbreaks, and other complex contingency operations. Given the lethality and complexity of the battlefield, in conjunction with our sister services, we have achieved stunning survivability rates and the lowest rate of disease and non-battle injuries.

Our medical knowledge in trauma care, traumatic brain injury, aeromedical evacuation, amputee care, and other combat medicine-related disciplines have changed how trauma care is delivered on the battlefield, home front, and across the globe. These outcomes, lives saved, and advancements do not happen by chance, as they are the result of an integrated and well-synchronized plan and a healthcare delivery capability that extends from the battlefield to the garrison environment.

To remain the Nation's premier expeditionary and globally integrated medical force, readiness is my number one priority, which is in 100 percent alignment with the Army Chief of Staff priorities. We must be ready to support our Army and the Joint Force in any environment; ready to adapt and apply our full spectrum of AMEDD capabilities from injury to recovery; ready to identify and apply innovative technologies; and ready to strengthen the physical and psychological wellbeing of our Soldiers, Soldiers for Life, and their Families. Predictable and consistent funding is essential for the Army and Army Medicine to improve readiness and progress toward a more modern, capable, and responsive future medical force. If we return to sequestration-level funding in fiscal year 2018, Army Medicine will be unable to sustain the levels of responsiveness and readiness that our Army and our Nation requires to face emerging challenges and contingencies.

We are preparing for future operating environment challenges, as the global security environment remains volatile, uncertain, and highly complex. The emergence of peer and near-peer adversaries combined with rapid technological expansion presents great risk to the traditional construct of battlefield medical support. Electronic warfare, unmanned aerial vehicles, extended-range weaponry, and non-traditional kinetics present real possibilities for increased lethality and decreased patient evacuation opportunities. Nonetheless, we must innovate and be prepared to deliver world-class Health Services Support in any dynamic or contested environment.

As we look to the future, the Multi-Domain Battle concept consisting of land, air, maritime, space and cyberspace domains will require us to be increasingly responsive and able to rapidly scale and reconfigure our medical support capabilities. Army Medicine has been proactive in balancing land-component modularity while promoting inter-Service interoperability; ensuring the right medical capabilities will be available at the right place and right time. Combatant Commands rely on the Services, particularly the Army, for medical capabilities to support a vast range of military operations. Last year Army Medicine rapidly assembled a damage control surgical capability to support special and conventional forces operating in a widely dispersed environment within the U.S. Army Africa Command region. Deemed an overwhelming success, these small resuscitative teams continue to rotate every 4 months and demonstrate Army Medicine's commitment to provide rapid and adaptive solutions to support Combatant Commands and the Joint Force.

Army Medicine is about to undergo significant organizational change associated with the fiscal year 2017 National Defense Authorization Act (NDAA) which may have far-reaching second and third order effects. We are working closely with the Defense Health Agency (DHA) and the JHSE to implement these legislative changes, which requires deliberate planning and analysis. We wholeheartedly support the intent of Congress and will work diligently to also meet the operational requirements of our Combatant Commanders and provide quality healthcare to our beneficiaries.

In support of my number one priority of readiness, we have established four Lines of Effort as part of the 2017 Army Medicine Campaign Plan: (1) Readiness and Health; (2) Force Development; (3) Healthcare Delivery; and (4) Taking Care of Ourselves, our Soldiers for Life, Department of the Army (DA) Civilians, and Families. These priorities endure, our resolve has strengthened, and we continue to move forward with implementation. In the face of global security and industry reform challenges, we will continue to innovate and evolve to become an integrated system for health and the Nation's first choice for expeditionary health services. Since 1775, Army Medicine has responded to the call—whenever and wherever needed—supporting the Soldier and all those entrusted to our care.

READINESS AND HEALTH

Readiness remains the most critical focus of the Total Army and supporting the Soldier's readiness is Army Medicine's primary mission. No other health system operates at the scale and magnitude of Army Medicine, which serves over 11,000 new accessions monthly across the total force. Army Medicine serves over 180,000 patients on a daily basis, but our readiness mission extends well beyond the walls of our military treatment facilities to include expeditionary medicine, medical evacuation, an array of public health services, and medical research efforts to protect our Soldiers before, during, and after deployment. Readiness permeates everything we do from prevention and resilience to rehabilitation and transition. As the Nation's premier and globally integrated medical force, we have enhanced individual and unit readiness by embedding assets within the maneuver Brigade Combat Teams to prevent and treat musculoskeletal injuries, address behavioral health issues within our formations, and enhance our responsive medical capabilities.

Medical readiness consists of two essential components, a force that is medically ready and a medical force that is prepared to provide capability in any environment our Force needs us: (1) individual Soldiers must be physically and mentally fit, ready to deploy anywhere, anytime and (2) Army Medicine must be a responsive medical capability with clinically proficient individuals who are also facile in their warrior tasks and drills. Our ability to sustain readiness and deploy healthy individuals and organizations in support of the world's premier combat force must be absolute.

Soldier Medical Readiness

A fit and healthy fighting force is the foundation of a strong national defense and the strength of our Army is inextricably linked to our Soldiers' individual health and wellness. Because the Army is a demanding profession with a host of injury risks, Soldiers must have the requisite level of endurance to perform the physical and mental tasks of their occupation. Although medical readiness is a shared responsibility between the individual Soldier, Command Teams and enabling organizations, Army Medicine plays a decisive role in monitoring, assessing and identifying key health-related indicators and outcomes as well as providing recommendations to mitigate these risks.

Within the behavioral health sphere, Army medicine has leaned far forward with our Embedded Behavioral Health (EBH) program, which has been consistently recognized as a DoD-wide best practice. EBH provides early Behavioral Health (BH) intervention and treatment to Soldiers in close proximity to their unit area. Soldiers receive expedited evaluations and treatment from a single provider, which greatly improves continuity of care and facilitates close coordination with unit leaders. The enduring working relationship between the BH provider and key battalion personnel also addresses stigma commonly associated with seeking BH care.

EBH has been associated with improved access, quality, and safety in Soldier care and improved readiness to deploy. Since the implementation of EBH in 2012, 45 percent fewer Soldiers with Post-Traumatic Stress Disorder (PTSD) have received prescriptions for benzodiazepines, a potentially addictive group of medications. Further, we have increased the use of evidenced-based psychotherapy and intensive outpatient program options. With more Soldiers receiving care in the outpatient setting, BH conditions are being managed earlier, before crises occur. Soldiers required 67,000 fewer inpatient bed days for all types of BH conditions in 2016, as compared to 2012 (approx. 41 percent decrease), due to improvements in outpatient services, EBH, Intensive Outpatient Programs and case management. EBH's effectiveness has been further supported in a program evaluation conducted by the Massachusetts Institute of Technology (MIT) between 2010 and 2015. As of December 2016, we have fully implemented EBH in all operational units, to include 62 EBH teams staffing 450 EBH providers in direct support of 31 brigade combat teams and 156 other battalion and brigade sized units.

While some level of illness, training-related or operationally-induced injury is unavoidable; there are many opportunities to intervene before a health-limiting event occurs. Army Medicine is leveraging our System for Health programs and Health Information Technology (HIT) to better detect such opportunities to improve readiness, such as the Medical Readiness Assessment Tool (MRAT). The MRAT is a HIT decision support tool that predicts if a Soldier is at risk for becoming non-deployable in the next 4-6 months. The tool uses diagnoses and medication data from the electronic health record (EHR) and fitness performance data from unit tracking systems to identify Soldiers with recurring medical limitations and high-risk behaviors that predispose them to illness and injury. The MRAT facilitates early intervention. When a high-risk condition is identified, including the management of multiple com-

plex prescriptions, the Soldier's health team can intervene to prevent addiction or a permanent medical limitation.

Army Medicine is positively influencing a culture of health by providing Soldiers and Commands comprehensive health services, education, tracking and monitoring tools. The Army is currently in the final phase of a medical readiness transformation. We have modified our readiness systems to improve Commanders' understanding and engagement. In June 2016 we launched a readiness dashboard, the Commander's Portal, and a reengineered physical profiling system (eProfile), which includes over 250 standardizing templates for the most commonly profiled injuries and illnesses. Using only one web-based tool, which our line leaders affirm is much easier to use, Commanders can view all medical readiness data, to include eProfile and MRAT, and communicate directly with medical providers before making deployability determinations for their Soldiers.

The Commander's Portal and other transformation initiatives have resulted in more timely identification of deficiencies, improved communication between healthcare teams and unit commanders, and increased oversight of unit and individual medical readiness. Between February 2016 and February 2017, deployable rates increased across all three Army Components. Additionally, dental programs such as Go First Class, Direct Care Dental Services, and the Deployed Dental Care Program have reduced dental treatment needs by over 50 percent and improved dental wellness. Go First Class combines dental exams with hygiene and restorative appointments, and has saved nearly one million man hours spent traveling to and from appointments.

As our readiness tools and programs mature, Army Medicine will continue to incorporate lessons learned to reduce the burden on commanders, clinicians, and Soldiers to manage health and readiness. In 2014 we launched the Performance Triad program to empower our Soldiers and families with knowledge and tools to improve their personal health readiness through changes in sleep, activity, and nutritional habits. With the Performance Triad we have developed a sustainable program to meet the health needs of Soldiers and leaders. Strong leadership support for the Army Performance Triad has increased healthy food options in our installations' dining facilities and has positively impacted work-rest cycles in training and garrison settings. After unit-wide application of the Performance Triad tenets, an armored battalion reported a 21 percent increase in gunnery scores, and another infantry battalion achieved an all-time lowest adverse safety incident rate at the Joint Readiness Training Center (JRTC). Engaged leadership is the most important factor in influencing the healthy behaviors within our formations, and I am confident we are continuing to move in the right direction. Army Medicine will continue to provide tools and knowledge to steer a cultural change toward health, optimal performance and sustained readiness.

Ready and Responsive Medical Capability

In order for the Army to prevail on the battlefield, in the unforgiving crucible of ground combat, our Soldiers must be in top physical and mental health. Our medical branch of our Army must not only ensure medical readiness of our Force but must also be ready, agile, and responsive to deploy on a moment's notice, save lives, and evacuate casualties to definitive care. While we are the experts on battlefield medicine and applaud achieving remarkable combat survivability rates over the past 15 years, we must continue to improve and innovate to achieve our goal of zero preventable battlefield deaths.

To be postured to respond to the next set of challenges we must focus our clinical training efforts and mitigate critical capability gaps. We anticipate the future threat environment may require casualty care holding that exceeds current evacuation planning factors (i.e. the Golden Hour). Due to tactical or operational circumstances, any member of the ground force healthcare team (combat medic, nurse, or physician) may be faced with providing prolonged casualty care in an environment lacking robust medical infrastructure. Army Medicine is exploring multiple methods to reduce risk caused by evacuation limitations, such as bringing surgical capabilities further forward to the point of injury. Virtual Health (VH) capabilities may also augment treatment when a patient's condition is deteriorating and threatens to outpace the skill level of a first responder. Ultimately, prolonged care requires core clinical and battlefield medicine competencies at every skill level; and competency requires repetition.

We view our Medical Treatment Facilities (MTFs) as health readiness platforms that provide training in support of responsive medical capabilities and to maximize medical readiness of the total Army. MTFs provide our medics, doctors, nurses and other health professionals the opportunity to perform skill repetitions every day, both individually and more importantly, collectively as a team. We leverage our

larger facilities to develop and sustain the trauma, critical care, and complex surgical care skills required to save lives on and off the battlefield. The Army also maintains sophisticated simulation training centers to further maintain the proficiency of our medical personnel, particularly those deploying or assigned in operating force formations. For example, the Anderson Simulation Center, located at Madigan Army Medical Center, is the first DoD facility to be accredited both by the American College of Surgeons (ACS) and the Society for Simulation in Healthcare (SSH). We are proud that the Anderson Simulation Center remains one of seven sites across the United States to hold Level 1 SSH accreditation.

Training is the foundation of a ready and responsive medical force. Army Medicine conducts training and operations across every platform, from expeditionary and prehospital to primary and tertiary care. Sustainable medical readiness stems from daily MTF operations and multiple echelons of medical training and education programs across Army Medicine. Each year we train more than 35,000 students at the Army Medical Department Center and School Health Readiness Center of Excellence, and nearly 1,500 physicians in Graduate Medical Education (GME). Most notably, our GME programs are vital in force generation and retention. The reach of Army GME extends across all Army components. Those leaving active duty service are a primary source of GME-trained physicians for the Nation's civilian healthcare system, as well as the Army Reserves and National Guard, which helps offset civilian physician training shortages.

Army Medicine hosts the largest GME platform in the DoD with the largest number of training institutions, programs, and officers in training. Approximately 93 percent of all Army GME training is conducted within a DoD program or institution. There is a national shortage of residency training positions in the civilian sector; therefore, training in DoD facilities ensures sufficient quantity for each specialty needed to meet the requirements of the Joint Force, global health engagement and medical force readiness requirements. Our reputation for superior clinical training and leadership development boosts recruiting and retention efforts and our first time medical board certification pass rate of 95 percent well exceeds the 87 percent national average. However, we still suffer shortages in several key surgical specialties. Orthopedic, thoracic, and general surgery are critical shortfalls for Army Medicine across all components. We are actively working to adapt and align residency and fellowship training allocations to better emphasize trauma care capability, which will include expanding partnerships with civilian institutions to establish enduring training platform agreements for GME. We have also begun collaborating across the Services to leverage tri-service training platforms to optimize individual and team training opportunities.

Army Medicine collaborates with the civilian healthcare industry to expand readiness capabilities; we have learned from industry, just as industry has learned from us. Industry frequently looks to Army Medicine for cutting edge prehospital, trauma, and rehabilitation advances, and we actively collaborate with them, particularly in the research realm. Combat casualty care research and revolutionizing clinical practices led to one of the highest survival and recovery rates among injured Service Members over the past 15 years. Many of the skills applied on the battlefield have been incorporated into military and civilian prehospital and trauma protocols. Public-private partnerships facilitate resource sharing and expedite research, development, and acquisition in many mission-relevant healthcare areas. Past decisions have led to remarkable advances in the knowledge and care of infectious diseases such as Zika, Ebola, HIV, and Malaria. Further advances have also been made in physical and mental combat-related wounds, such as Traumatic Brain Injury (TBI) and Post Traumatic Stress Disorder. Our decisions today must preserve the Army's core medical research competencies; and through continued investment, build a capability that ensures strategic advantage in future and more complex operational scenarios.

FORCE DEVELOPMENT

Army Medicine includes 138,000 Soldiers and civilians serving in diverse clinical, support, and research specialty areas and the majority of our uniformed medical force is in the Army Reserve and Army National Guard. Integration of this total Force helps us provide responsive medical capabilities whether on a battlefield, in an austere environment, addressing a humanitarian crisis, or answering any other call to our Nation. We have not only invested in educating and training our Force but also are committed to building high-performing medical teams that will thrive in a highly complex future operating environment. Army Medicine has taken proactive measures in our Force development to ensure that we are able to support rapid deployments with mission-ready personnel and equipment. We invest heavily

in our most valued asset, our people, to ensure the Army Medicine team continues to demonstrate individual and collective excellence.

The acquisition, development, employment, and retention of a broad and diverse spectrum of healthcare talent are critical to conduct missions across multiple domains, and to meet the challenges of enduring requirements and unanticipated contingencies. Army Medicine is continuing to deliberately manage talent at all levels and in all components. We are improving efforts to match specific job requirements with the individual's skills and experience, while developing them to their fullest potential. Last year, our Talent Management Directorate collaborated with stakeholders to fully codify the knowledge, skills, and behaviors required for senior leader billets and reviewed all positions to match talent with strategic organizational demands. We are also transforming our Professional Filler System (PROFIS), in which medical personnel are on-notice to deploy in support of an operational unit.

Future-focused human capital management is further complemented by medical force modernization efforts to better align Army Medicine in support of the Army and Joint Force. In fiscal year 2017 the Army began fielding a redesign to increase capabilities of the Combat Support Hospital. The newly configured Field Hospital (FH) includes more specialized physician and nursing staff; and is able to accommodate split operations while preserving full medical, communication, and command capabilities. Furthermore, modular augmentation detachment options enable scalable surgical treatment and hospitalization requirements. Another redesign initiative, the Forward Resuscitative Surgical Team (FRST), will launch in fiscal year 2018. This rapidly deployable team is self-mobile, networked, modular and scalable. In addition to providing damage control surgery, FRSTs provide emergency treatment and postoperative care. The conversion timelines for both the FH and FRST span fiscal year 2017 to fiscal year 2022; and all projected modernization requirements are synchronized between Active and Reserve Components.

Other examples of increased versatility and agility include en-route critical care teams and the enhanced combat medic initiatives. Our en-route critical care nurses continue to deploy and fly missions; this capability, in combination with paramedic flight training, adds immediate life-saving measures in the pre-hospital environment. Army Medicine is actively increasing enlisted en-route care providers to meet the objective of having a Paramedic with Critical Care Training in the back of every Army Air Ambulance. Enlisted skill capability requires expansion because the tactical environment involves combat medics working without a provider on site, particularly when evacuation is delayed or unavailable. In previous wars, up to 90 percent of combat deaths occurred before a casualty reached a medical treatment facility; however, throughout the most recent conflict, continuous process improvement in Tactical Combat Casualty Care drastically reduced the number of military personnel dying of potentially survivable combat wounds to a historic low of 3 percent. The many training improvements developed from the lessons of war are now saving lives, and the efforts to sustain these skills will offer the best chance of survival and recovery to those we care for in the future. Critical care is not just for the back of an air ambulance as it is also required on the ground to support expeditionary medical requirements.

Military medical readiness is highly dependent on learning lessons from past conflicts and ensuring that we are prepared at the start of any conflict. Although military medicine has advanced throughout every successive conflict, we have experienced challenges when responding to the next war. For example, 5 years after the US successfully ended World War II, we entered the Korean War with a significantly reduced force and critical physician shortages. Although Task Force (TF) Smith, part of the 21st Infantry Regiment, was deemed to be at a high state of readiness and medical training; medical supplies were exhausted within hours of combat operations and simple medical procedures became overly complicated in an austere environment. While there was no shortage of medical ingenuity and heroism in saving as many as possible, there was no reliable resupply plan or evacuation route. We must use lessons learned from past and current conflicts to preserve and advance institutional knowledge and remain postured to save as many lives as possible on future battlefields.

Medical Innovation

Army Medicine continues to lead with respect to medical innovation. The U.S. Army Medical Research and Materiel Command (USAMRMC) readily partners with our sister Services, the Defense Health Agency and other Federal agencies to coordinate and maximize DoD's efforts in research, development, testing and evaluation (RDT&E). Successfully advancing a new medical technology through all phases of RDT&E may require as much as \$1 billion investment. Within the pharmaceutical industry, only one in twelve products will successfully make it to the market. To

avoid exorbitant costs and timelines, Army Medicine purposefully seeks and fosters partnerships with academia and commercial industry to gain initial investments, industry expertise, and to leverage existing resources when possible. This shared model often results in faster development, fewer expended resources from a sole source, and dual-use products that immediately benefit the Service Members as well as civilians.

The recent Zika vaccine trial at the Walter Reed Army Institute of Research (WRAIR) is an example of leveraged Federal and industry partnerships to fund and conduct clinical trials in the interest of military readiness and civilian health. This early-stage Zika vaccine effort is one of several federally-funded vaccine development initiatives under the auspices of the Department of Health and Human Services. After recognizing the epidemic potential of Zika, WRAIR scientists began work to manufacture vaccine doses for a clinical trial. The effort took just 8 months, which was unprecedented in the vaccine-developer community. The Army was able to rapidly move through developing, manufacturing, and testing a Zika vaccine because of its extensive experience and long-standing investments in other vaccine research platforms. Similarly, the Army's firmly established infectious disease experience and international relationships allowed our researchers and scientists to swiftly respond to the 2013 Ebola crisis in West Africa.

DoD's efforts in research and development not only builds force readiness, but also increases national security and bolsters homeland security preparedness. Hemorrhage is the leading cause of death in both civilian and military trauma. In 2016, military surgical teams in Operation Inherent Resolve successfully used the innovative Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) catheter to save the lives of four combat casualties. The flexible catheter allows medical teams to control bleeding, restore blood pressure, and reduces the need for blood transfusion in an austere surgical scenario. The REBOA is now being used in civilian medical centers across the country in the care of US civilians injured in accidents, acts of violence and natural disasters.

The Defense Health Program and Military Medical Research Programs are our Nation's primary funders of trauma and injury research and development. No other private or Federal entity provides significant funding to advance the science involved in acute casualty care. Army medicine works collaboratively to find and fill research gaps by funding high impact, high risk and high gain projects that other agencies often do not venture to fund. For example, military research supported an effort to develop a process to improve reconstructive transplantation procedures using personalized surgical devices designed and rapidly prototyped from virtual surgical simulations. This novel surgical technology is expected to benefit civilians and Service Members with devastating craniofacial injuries.

Traumatic Brain Injury is another example of DoD's efforts in research and development. Since 2000, there have been over 357,000 TBIs diagnosed in the military. When TBI came into the forefront of the Nation's attention in 2006 the medical community had very few answers on how to prevent, treat, or limit morbidity related to TBI. Since then the Army has been at the forefront of TBI research, education, clinical care and policy. Collaboration between all three Services, the Department of Veterans Affairs (VA), and academia has contributed to improved TBI screening and treatment, as well as concussion management in deployed settings. The Army, along with the TBI Advisory Committee, has generated standardized clinical tools and clinical recommendations such as the Military Acute Concussion Evaluation. It has been an impressive journey as we progressed from limited treatment knowledge to clinical practice guidelines and full medical and leader engagement.

HEALTHCARE DELIVERY

From the battlefield to the garrison environment, Army Medicine provides access to safe, high quality healthcare. We cannot limit our focus to combat trauma, surgery, and burns—Army Medicine must preserve a broad range of medical capabilities. From 2001–2015 less than 21 percent of those evacuated from theater were injured in battle; the vast majority of care addressed non-battle illnesses and injuries. To prepare for a myriad of settings and conditions, and sustain training and education programs, our medical centers, hospitals and clinics need access to a diverse case and patient mix to include our family members, DoD Civilians, and Soldiers for Life.

Health services are an important benefit in the recruiting and retention of an all-volunteer force, as part of their unwavering commitment to serve and protect. To honor our commitment and beneficiaries' trust, we must continue to provide a health benefit commensurate or exceeding national standards. The primary perform-

ance domains of our healthcare system—access to care, quality and patient safety, and patient satisfaction—must be continually measured, assessed, and improved.

Access to Care (ATC)

We are facing a rapidly shifting healthcare delivery landscape. Nationally, health costs are outpacing inflation and technology is impacting how health information and services are provided. There are increasing demands to improve efficiency, access, and the patient experience; and expectations to decrease cost, performance variability, and redundancy. Army Medicine has been listening and responding. Over the past year Army Medicine has implemented aggressive efforts to expand access to care to ensure all beneficiaries are seen by the right provider, at the right time, in the right venue. We thoroughly overhauled appointment-scheduling systems, modified operating hours, expanded secure messaging and telehealth initiatives, and expanded community based medical homes. In 2016 Army Medicine received two ATC awards, to include 'Most Improved Service in ATC' from Military Health Service, and 'High Reliability Organization: Improved Primary Care ATC' from the Association of Military Surgeons of the United States.

As part of our effort to maximize ATC, we have added an additional 836,000 appointments in 2016 compared to 2015. The Nurse Advice Line (NAL) combined with secure messaging improved utilization of self-care and primary care appointments and lessened inappropriate emergency care, avoiding \$12 million in network costs in 2016. Concurrently, both inpatient and outpatient satisfaction has increased. Army Medicine has improved satisfaction rates by 10 percent over the past 2 years and is currently above the civilian benchmark for our medical and surgical services. Outpatient satisfaction in Army MTFs continues to be very high. Over 93 percent of beneficiaries indicate being satisfied with their overall healthcare and over 92 percent report being satisfied with their provider.

To decrease access to care barriers, Army Medicine is bringing integrated care closer to the patient through a patient-centered primary care model. The Army Medical Home (AMH) staffs an integrated, multi-disciplinary healthcare team focused on proactive and comprehensive care. Each patient partners with a team of healthcare providers, which includes physicians, nurses, behavioral health professionals, pharmacists, dietitians, and others to develop a comprehensive, personal healthcare plan. The AMH model also extends to our Community Based Medical Homes (CBMHs) and Soldier Centered Medical Homes (SCMHs). CBMHs are located in off-post communities to more conveniently serve Army Families where they live and work. We have opened 20 CBMHs (serving 150K beneficiaries), and an additional seven CBMHs will open over the next 2 years. While all Army beneficiaries have access to primary care services with routine physical exams and accessible specialty care, the AMH offers enhanced care coordination, access, quality and safety. Our patient-centered access and care coordination initiatives have produced excellent results. Our hospital readmission rates have reduced from 34 per 1000 enrolled beneficiaries to 30 per 1000 enrolled beneficiaries from September 2015 to November 2016. During this same timeframe, our preventable admission rate has improved from 20 per 100,000 to 17 per 100,000 enrolled beneficiaries.

The Army SCMh is the Soldier's version of the AMH model. In addition to offering enhanced care coordination, access, quality and safety, the SCMh mission improves medical readiness. The SCMh delivers 90 percent of Soldier care in a single location, eliminating the need for multiple referrals and the unnecessary loss of duty time. The SCMh model also integrates the medical staff from the Soldier's unit of assignment with the medical staff from the MTF. The physicians, medics, and physical therapists from the Soldier's Unit have a unique relationship, because they work and train alongside their patient population. This facilitates better rapport, accountability, and a direct line of communication with the Unit Commanders to advise them of high-risk Soldier activity or other concerning trends, such as musculoskeletal injuries.

Virtual Health represents our largest initiative to improve access and bring care closer to the patient. Army Medicine is a recognized leader in VH, with services spanning 18 time zones, 30 countries and territories, and over 30 clinical specialties. Using VH, the best of Army Medicine can be brought to the patient wherever they are, whether deployed or in garrison. In 2016, our Regional Health Command-Europe exhibited exemplary utilization of VH by saving Soldiers, beneficiaries and Commanders an estimated 2,050 work and school days, \$1.34 million in travel-related expenses, and 825,000 kilometers of travel. For many years Army Medicine has excelled with VH in the deployed environment. We have ongoing programs supporting Special Forces with real-time provider-provider and medic-Intensivist consults; and teleconsultation for all deployed providers (aka Ask-a-Doc).

As we build capability on the battlefield, we also will continue to expand VH capabilities for our Soldiers and their Families in garrison. To augment current global VH offerings in over 30 specialties, we are collaborating with counterparts in the Joint Health Service Enterprise to establish an enterprise platform for Virtual Video Visits and a Global Teleconsultations Portal. These platforms will help meet the requirements for Section 718 of the 2017 NDAA, along with collaborative pilots beginning in Home Health Monitoring. Army Medicine is currently conducting over 40 pilots and programs to be used in the enterprise program and expand the use of VH for our beneficiaries.

All VH programs are part of a comprehensive business plan for bringing tomorrow's healthcare today to our Nation's heroes. Current programs include emergency, primary and specialty care, and pre- and post-surgical consultations. Army Medicine is also rolling out VH cart technologies, which will enable providers to diagnose and treat patients remotely by electronically transmitting real-time vital signs and images. In culmination, we are establishing a Virtual Medical Center with clinicians and staff that specialize in remote care delivery. We envision a globally integrated garrison and deployed VH system under a centralized program structure.

Quality and Safety

Whether delivered remotely, inpatient, or outpatient, all care provided must be safe and of a quality that meets or exceeds national benchmarks. By constantly asking "What could possibly go wrong?" using tools such as checklists and preparing for the unexpected, much in the way that a squad assesses the risks of a combat mission, medical, surgical and dental teams can reduce preventable errors to zero. To promote a culture of safety, we have incorporated patient safety tools and strategies and adopted aggressive high reliability and learning organization principles.

Throughout the Army direct care system, all MTF staff are trained in Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS®), which is an evidence-based set of teamwork tools, created by an enduring collaboration between the DoD and the Agency for Healthcare Research and Quality, to improve health team communication skills and optimize patient outcomes. Our care teams brief, huddle, and debrief during their shifts; and, if any staff member observes potential for patient harm they are required to speak up. Notably, as part of a High Reliability Organization (HRO), team members are strongly encouraged to voluntarily report errors and near-misses. Non-punitive reporting practices in a climate of psychological safety contribute to institutional learning and increase safety and performance. Army Medicine strives to strike the balance between psychological safety and accountability.

Negligence and lack of competence are in the minority of root causes for patient harm; most errors are caused by disconnected or antiquated workflow systems or processes. Once the conditions that led to an error are identified, mitigation and improvement strategies can be implemented throughout the organization. Since 2011, Army Medicine improved 4 percent on communication openness measures, and 5 percent on non-punitive response to errors, which exceeds national benchmarks.

In the Military Health System (MHS) Review of 2014 nearly 200 metrics were evaluated and indicated significant variation in MTF performance. Since then, Army Medicine has taken corrective action to meet action plan requirements and has improved outlier MTF performance to the standard or better. Army Medicine is also complying with specific MHS Review recommendations to expand the American College of Surgeon's National Surgical Quality Improvement Program® (NSQIP), designed to improve the quality of surgical care and skill (readiness) experience, to all MTFs where surgery is performed. Only 681 hospitals worldwide, and 603 of the 5,564 registered acute care hospitals nationwide participate in NSQIP. We are proud to include all of our hospitals in this nationally validated, risk-adjusted, outcomes-based program. Because we collect, analyze, and take action on this benchmarked data, we are among the top 25 percent of hospitals in the United States. Dwight D. Eisenhower Army Medical Center in Fort Gordon, Georgia, has been recognized by the American College of Surgeons for its exemplary surgical outcomes that place them in the top 1 percent of hospitals nationwide in overall surgical morbidity. In collaboration with our tri-service and civilian partners, we are identifying and acting on data trends, developing and sharing best practices, standardizing processes and workflows, and putting systems in place to prevent surgical "Never Events," such as wrong site surgeries and unintended retained foreign objects.

TAKING CARE OF OURSELVES, OUR SOLDIERS FOR LIFE, DA CIVILIANS, AND FAMILIES

Army Medicine is constantly progressing to preserve a healthy force with the physical, mental, emotional, and behavioral capabilities to adapt to and cope with

adversity. Our supporting family members and DA Civilians also face chronic stress, adversity, insufficient sleep, inadequate activity and poor dietary habits. Our family members are especially vulnerable to increased stress when Service Members are away from home either while deployed or during training exercises. Soldiers, Families, and Civilians serving and supporting deserve our undivided attention. As such, it is our duty to promote, improve, conserve, and restore the physical and psychological well-being of all our beneficiaries.

Behavioral Health

Family readiness supports Soldier readiness. Army Families experience significant stressors, such as frequent moves that necessitate changing of jobs and schools, establishing new friend and support networks, and deployments of spouses and parent(s). Research has demonstrated that combat deployments have had negative effects on up to 30 percent of family members. National shortages in behavioral health services further hinder the resiliency of our families. To address behavioral health (BH) access challenges, Army Medicine launched the Child and Family Behavioral Health System (CAFBHS). The CAFBHS boosts access and decreases stigma by positioning care near to where family members live, work and go to school. In fiscal year 2016, CAFBHS encounters numbered 252,867, an increase of 10.4 percent from the previous year. Significantly, we saw a 16.5 percent increase of child and adolescent encounters. Recognizing this specific increased demand, we have established partnerships with on-post and community organizations, such as the Military Child Education Coalition. Additionally, BH services will further expand in fiscal year 2017 to 100 on-post schools across 18 installations. Ongoing integration of BH into Primary Care, leveraging provider-to-provider teleconsultation and expanding community partnerships will be necessary to meet increasing BH demands.

To further reduce the stigma associated with seeking help for BH care, we have also positioned BH professionals in the Army Medical Homes. BH screening is part of every primary care visit, and affords an additional opportunity to a patient who is undecided about seeking BH services, or perhaps does not yet recognize the need. We are making every effort to recognize BH “vital signs,” and address them early in a safe and comfortable environment. The Tri-Services are collecting data to track clinical outcomes in BH patients. The Behavioral Health Data Portal (BHDP) has made it possible to gather BH vital signs at every visit and track associated symptoms over time. At each visit, the patient is given self-reporting questionnaires to complete on a tablet or kiosk. The results are immediately available to the provider facilitating an efficient method to monitor symptoms; make adjustments to the treatment plan; measure the effectiveness of treatment; and inform decisions regarding BH readiness. Aggregated data are used to create system-wide treatment outcome measures which inform future policy to maximize the quality and effectiveness of care. The BHDP is available in 100 percent of Army BH clinics, 14 CAFBHS clinics, 11 primary care clinics, and four Army National Guard (ARNG) States; we are continuing to implement at additional clinics, including ARNG clinics.

Often referred to as the invisible wound of war, PTSD is the most common BH diagnosis after exposure to traumatic events; 5–20 percent of Soldiers who have deployed to Iraq or Afghanistan meet the clinical criteria for PTSD. Routine screening for PTSD is conducted in primary care settings, pre- and post-deployment, and annually throughout a Soldier's career. Of Soldiers who received a new diagnosis of PTSD in Army BH clinics, approximately 70 percent received at least four treatment encounters within 90 days, a rate far exceeding those reported in other studies of VA or civilian populations. Though not limited to combat, PTSD is common after other traumatic events, including sexual assault, accidents, and natural disasters. There is also a strong association with other mental and physical health problems, such as chronic pain, fatigue, concentration or memory problems, and persistent health concerns following blast related concussions.

An alarming disorder associated with PTSD and other BH conditions is substance abuse. Currently, 30 percent of Soldiers with a behavioral health condition screen positive for substance use disorder, and 50 percent with suicidal ideation screen positive for excessive alcohol use. In fiscal year 2016, the Army enrolled over 11,600 Soldiers, the equivalent of over two brigade combat teams, in mandatory Substance Use Disorder Clinical Care, which significantly restricts their readiness to deploy. Following a 2015 study, the Secretary of the Army ordered the transfer of substance use disorder clinical care assets from Installation Management Command to Army Medicine. Since assumption in October 2016, we have made significant progress in key safety and quality areas.

Addiction trained providers are available to support embedded BH providers in the Soldiers' unit area. This increased proximity reduces missed duty time, streamlines appointments and improves communication between medical providers. Army

Medicine is working to improve outcomes for all beneficiaries with substance use disorders through earlier detection and intervention. The realignment of substance abuse rehabilitation and treatment under Army Medicine facilitates full integration into BH clinics and the entire medical system of care. This allows us to treat and manage substance use disorders at multiple points of entry, and as a multi-disciplinary treatment team engaging primary care providers, who often prescribe these medications, behavioral health providers, and addictions specialists.

SOLDIERS IN TRANSITION

Whether suffering from a physical or mental illness, Army Medicine makes extraordinary efforts to rehabilitate our Soldiers. Unfortunately, certain conditions are not conducive to continued service. Soldiers who are not medically ready to deploy are referred to a Medical Evaluation Board (MEB), and if deemed unfit, enter the Integrated Disability Evaluation System (IDES). The Army, in conjunction with Department of Veterans Affairs, has made tremendous progress in decreasing Disability Evaluation System (DES) processing time. Three years ago, the average time for a Soldier in the DES was well over 400 days. Over the past year, the average time to complete all components of this very complex process has improved to less than 250 days, which is well below the DoD standard of 295 days. Compared to 2012, a Soldier now spends one third less time (143 days less) in the IDES process, which improves unit readiness by allowing replacement of non-deployable Soldiers in a timely manner. Workflow standardization and closer collaboration between DoD and VA partners has provided greater predictability for Soldiers and their Families as they transition to the next stages of their lives. Army Medicine will continue to provide a consistent and predictable process that enables Soldiers with serious medical conditions to be able to plan for the next phase of their life as a proud Veteran or Army Retiree.

Soldiers who cannot recover while serving in their assigned unit, due to a more complex illness or injury, may be placed in our Warrior Care and Transition (WCT) Program. Army Warrior Care's whole-Soldier approach is a crucial part of the pact by which the Army fulfills its duty to those citizens who heed the call to serve. The WCT program occupies a special place on the healthcare continuum where bedside medical treatment ends and the full emotional and physical recovery journey begins. A multi-disciplinary team advocates for and serves the Soldier, their family, and caregivers. WCT care includes coordination of complex treatment requirements; mind and body rehabilitative programs; reconditioning activities like sports and art; education and career resources; and a path to return to the force fully healed.

Since inception, more than 72,000 wounded, ill, or injured Soldiers and their families have completed the WCT program, with over 30,000 returning to the force. Soldiers who return to the force result in a substantial cost savings in terms of recruitment, education and training. The Army also benefits in terms of readiness by retaining experienced, highly educated and trained Soldiers. As of December 2016, our WCT population was 2,250 (decreased from 2,861 1 year ago), of which 48 Soldiers were battle injured. This represents a great shift from our highest population of 12,279 in July 2008, of which 1,996 Soldiers were battle injured, corresponding with a drawdown in contingency operations. In June 2016 the WCT program consolidated from 25 to 14 units and aligned to U.S. Forces Command Force Projection Platforms, Divisions, and Corps, but this program will remain an enduring capability that can be rapidly expanded when needed. Our wounded, ill and injured Soldiers will continue to receive the highest level of care in order to successfully recover and return to the force or transition to Veteran status. I will also continue to improve upon our current relationships with the VA and our Veteran and Military Support Organizations to ensure our transitioning Soldiers have the resources required for a successful transition to Veteran status.

Some of our Warriors cannot return to duty, but have gone on to make remarkable contributions to society in sports, the arts, skilled trades, and public or government positions. WCT hosted the 2016 Warrior Games, delivering not only unparalleled recognition for wounded athletes, but also inspiration for countless other wounded who could see a road to recovery through sports. Drawing upon their experiences, education, insights, and the emotional and physical rehabilitation delivered by WCT, our Warriors serve as role models—inspiring both Soldiers and civilians spiritually and physically.

CONCLUSION

The sun never sets on Army Medicine. We are globally engaged, supporting our Army whenever and wherever needed; we have done so since 1775 and will continue as long as there is an Army. Congressional support has enabled Army Medicine and

advanced military medical care in support of our Nation, our Army, and the Joint Force. What we do is truly important but is not the complete story of Army Medicine.

Just as the Army protects our freedoms and national interests, Army Medicine protects our Soldiers, Retirees, and their families by enabling readiness and promoting health. To take care of our Soldiers, our medical professionals ensure they receive the care they need and the care they deserve from the forward edge of battle all the way back to their homes. That is what we do but, in closing, I would like to describe what we are for. Army Medicine is for saving lives and conserving the fighting strength. Our Nation sends their sons and daughters to answer our Nation's call knowing we will take care of them whenever and wherever needed.

The Strength of our Army is derived from our Soldiers, and in turn, their Families. Our strength is not derived from a weapon or a weapons system; it is derived from our people. Army Medicine is a driving force behind the innovations and technologies that allow us to adapt to future challenges that may arise at home or abroad. We will continue to provide the full spectrum of care from point of injury or illness on a battlefield through rehabilitative care while continuing to meet or exceed national quality of care standards in garrison environments. This is our sacred trust with our Nation and our readiness to support our Nation's Army can never and will never be in doubt.

I remain committed to improving readiness, enhancing the healthcare delivered to our beneficiaries, evolving to support the Army and Joint Force in future conflicts, and continuing to take care of our Soldiers, Civilians, and their Families. I appreciate the subcommittee's work and continued support to our Army, our Soldiers and to Army Medicine.

Senator COCHRAN. Thank you very much, General. I will now recognize the distinguished Vice Admiral Forrest Faison, Surgeon General of the Navy, for any opening statement.

STATEMENT OF ADMIRAL FORREST C. FAISON, III, SURGEON GENERAL, UNITED STATES NAVY

Admiral FAISON. Sir, thank you. Chairman Cochran, Vice Chairman Durbin, distinguished members of the subcommittee, thank you for the opportunity to update you on Navy Medicine. We value your important oversight role and remain grateful for your support.

Navy Medicine is a versatile, ready, agile, and rapidly responsive medical force that directly supports the Navy and Marine Corps, America's premier maritime and expeditionary forces, anywhere and everywhere our Nation calls upon them.

I can assure you the men and women of Navy Medicine, 63,000 strong, are working hard to support that force and provide world class care anytime, anywhere.

My full statement provides you with detailed updates, but in the interest of time, my opening remarks will focus on our most important priority, readiness. We have no greater responsibility than standing readiness now and in the future.

On any given day, Navy Medicine personnel are forward deployed with the Fleet, Marine Forces, Special Warfare Units, the Joint Force, and at overseas commands, supporting a high operational tempo in meeting the demand for contingency operations around the world.

Just as importantly, shipmates are supporting the Navy-Marine Corps team in a variety of ways, including delivering care in our statewide and overseas hospitals and clinics, continuously honing their clinical and operational skills and training to provide life-saving and health sustaining capabilities when deployed to their operational platforms around the world.

Those responsibilities set us apart from the civilian healthcare sector. We remain one of the few nations that maintain a sizeable

immediately ready to serve medical force at standing to support both operational contingencies and rapid disaster response, helping to preserve America's strategic influence in key regions around the world, and strengthening relationships with our partners and allies.

In sustaining our readiness capabilities for the next conflict, new approaches to training, preparation, equipment, and support required by our operational and deployed medical personnel will be critical to realizing high combat survivability, as we witnessed during the most recent conflicts. These considerations are critically important as we move forward.

Skills sustainment of our medical personnel is paramount. I have previously articulated the important role of our military treatment facilities in ensuring our personnel have the vital skills and clinical competencies needed to save lives on the battlefield.

These military commands are our training and surge platforms where we prepare and then rapidly surge medical forces when needed. They provide peacetime healthcare as one of several ways to preserve their clinical skills, but that is not their primary purpose.

Their readiness and force projection platforms combined and integrated within Navy Medicine's readiness commands and structure allow our personnel to gain both clinical competencies and develop required military skills in these commands, and are prepared to rapidly surge when required.

One of our primary reasons for the high combat survivability rate we have realized is the heroic work by our Navy hospital corpsmen, the Navy's largest enlisted rating. You and the American public can be justifiably proud of their tremendous sacrifices and contributions.

Corpsmen are responsible for delivering initial healthcare on the battlefield or in an isolated assignment, aboard a ship or submarine, far away from shore or any MTF (Military Treatment Facilities).

To this end, we are changing and improving the training of our hospital corpsmen "A" school in San Antonio. Our curriculum changes are focused on providing ready and relevant training that will prepare them to manage the continuum of care in a high threat or complex environment most likely to be encountered by our sea-based expeditionary Navy and Marine Corps Forces.

We are also continuing to leverage our private and academic partnerships in key areas, such as trauma training at LA County, where we have trained over 3,100 personnel, as well as the trauma and burn program at the Federal Health Center in Chicago, in partnership with Cook County Health and Hospital Systems.

Our readiness focus is also evident in our commitment to global health engagement. As I speak to you this morning, Navy Medicine personnel are deployed in support of Continuing Promise 2017, a civic humanitarian mission in the Caribbean, Central and South America, where they are working with host nation counterparts to deliver medical service.

Likewise, these shipmates concluded a similar mission in September, Pacific Partnership 2016, a major multilateral disaster re-

lief preparedness mission in the Indo-Asia Pacific area of operations.

These efforts are complemented by the innovative work in our research and development labs around the world where we are addressing critical military relevant research priorities, including malaria vaccine development, to protect our forces now and in the future.

All Navy Medicine Commands, MTS, education and training, research and development, public health, and logistics, are focused on protecting the health of sailors, Marines, and their families, in preparing for the next deployment.

In closing, America's sailors and marines are the most highly trained, educated, and specialized forces in our Nation's history. Each is essential to the mission. The demand to keep them healthy, ready, and on the job has never been greater. At the same time, they must be confident that their family members will be well cared for when they are deployed.

We in Navy Medicine have no greater calling than to ensure we are doing all we can to provide the best care our Nation can offer, and do all in our power to one day return home alive, safe, and well, those who have volunteered to defend our freedom.

Thank you, sir. I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF VICE ADMIRAL C. FORREST FAISON III

Chairman Cochran, Vice Chairman Durbin, distinguished Members of the Subcommittee, thank you for the opportunity to update you on Navy Medicine. You have an important oversight role and we remain grateful for your support. Navy Medicine is a ready, agile and rapidly responsive medical force that directly supports the Navy and Marine Corps, America's premier expeditionary forces. I can assure you that the men and women of Navy Medicine—63,000 strong—are working hard to support that force and provide world-class care, anytime, anywhere. We never waiver from our commitment to those entrusted to our care, wherever they serve.

STRATEGIC FRAMEWORK

In 2016, the Chief of Naval Operations (CNO) issued A Design for Maintaining Maritime Superiority which clearly articulates several key strategic imperatives and initiatives for the Navy. His message is clear: We must understand the character of the changing security environment and be ready to rapidly respond. Navy Medicine understands this mandate as we are the ready medical force that supports both the Navy and Marine Corps in all warfare domains.

In alignment with the CNO and the Commandant of the Marine Corps, I issued my Commander's Guidance which focuses on the need to recognize that, in these transformational times, providing the best readiness, operational support, and health to the force protecting our interests around the world, requires unmatched commitment by all in Navy Medicine. I also reiterated our important guiding principles: honor the trust to provide the best care possible to those who defend our freedom; honor the uniform we wear; and, honor the privilege of leadership. Our strategic priorities include:

- Readiness*: We save lives wherever our forces operate—at and from the sea.
- Health*: We will provide the best care our Nation can offer to Sailors, Marines and their families to keep them healthy, ready and on the job.
- Partnerships*: We will expand and strengthen our partnerships to maximize readiness and health.

These goals are directly relevant to the men and women of Navy Medicine. We never waiver from our core readiness responsibilities: ensuring the medical capabilities of our operational units and platforms are ready and the readiness, training, clinical experience, and preparation of the medical force supporting them is unmatched. Our Navy and Marine Corps is more highly trained, specialized, and de-

ployed than ever before. Every Sailor and Marine is critical to the mission. We protect, maintain and restore the health of our service members and, in doing so, we treat them and their families as “family” by integrating healthcare in their lives through enhanced access and convenience. We are working hard to ensure that our Sailors and Marines have the healthcare support when and where they need it (and want it), making them partners in health and improving readiness. Navy Medicine is also stronger as a result of our partnerships and collaborations. We will continue to leverage these opportunities with the other Services, Defense Health Agency (DHA), interagency partners, academia and industry to fulfill our responsibilities and advance common interests.

I recognize that sustained and measurable progress on these goals requires the contributions from the entire Navy Medicine team. I am encouraged as to how strongly these priorities are resonating throughout our commands and we will continue to build on the progress we have made. We will, however, be challenged as our operational tempo remains high, the healthcare landscape continues to evolve, and our beneficiary population demographics and expectations change. These are significant considerations that will continue to influence our planning as we move forward.

Navy Medicine is grateful for your efforts in supporting our resource requirements. Inherent in our business practices is sound fiscal stewardship of the resources provided to us. The fiscal year 2017 National Defense Authorization Act (NDAA) directs many significant changes to the Military Health System (MHS), including the administration of our military treatment facilities (MTFs). I want to assure you that we are working closely with the DHA, the Joint Staff, the Army and Air Force to develop implementation plans to realize the very real benefits intended. These provide a great opportunity to us, but given our high operational tempo and the transformational impact on the Services and Combatant Commands, it is important that we proceed to affect these reforms with the requisite due diligence, rigorous analyses and careful planning. This is necessary to meet congressional intent while continuing to support a highly deployed expeditionary force with global commitments in a rapidly evolving and challenging world.

SUSTAINING READINESS: NOW AND IN THE FUTURE

Navy Medicine provides ready, agile, and rapidly responsive force medical projection to a highly mobile expeditionary Navy and Marine Corps team. On any given day, Navy Medicine personnel are forward deployed with the Fleet, Fleet Marine Forces, special warfare units and at overseas commands, all while continuing to support a high operational tempo and demand to support overseas contingency operations and numerous joint taskings in multiple areas. Just as importantly, our shipmates are supporting the Fleet and Fleet Marine Force in a variety of ways, including delivering care in our state-side and overseas MTFs, continuously honing their clinical and operational skills and training to provide life-saving and health sustaining capabilities when deployed to the operational platforms to which they are assigned. As the Navy and Marine Corps’ ready medical force, Navy Medicine has full-spectrum responsibilities to man, train and equip—to ensure individual clinical and operational readiness, deployable unit/platform readiness and force readiness.

These responsibilities set us apart from the civilian healthcare sector. We remain one of the few nations that maintain a sizable, ready-to-immediately-surge standing medical force to both support operational contingencies and rapid disaster response, helping to preserve America’s strategic influence in key regions of the world and strengthening relationships with our partners and allies. We are ready to get out the door and save lives tonight and this is the foundation of our commitment to those who serve and their families: We will be with them whenever and wherever they go, from day one forward.

The highest combat survival rate in recorded history during the last conflict was the direct result of three factors: (1) advanced training, preparation, and improved equipment of our corpsmen and medics to provide life-saving intervention at the point of injury; (2) forward deployment and rapid access to forward resuscitative surgery to provide timely damage control surgery; and (3) rapid and effective medical evacuation and enroute care to higher echelons of care within and outside of theater. We also had several advantages in a network of robust operating bases, rapid casualty recovery, a commitment by leadership to provide on-demand aeromedical evacuation, enabled by relatively unchallenged ground and air superiority. In sustaining our readiness capabilities for the next conflict, likely in a denied environment and a distributed force, we must recognize that the training, preparation, equipment and support required by our operational and deployed medical personnel will need to change in order to sustain high combat survival under those dif-

ferent circumstances. Survivability in the future warfighting environment requires medical capabilities which are immediately deployable, designed, sustained and integrated into the operating forces to meet Navy and Marine Corps unique requirements. These considerations are important as we move forward with our expeditionary health service systems modernization efforts.

As a former commander/commanding officer of a medical center, hospital and deployed commander in theater of an expeditionary medical facility, I know the importance and operational effectiveness of having a fully trained and ready medical force capable of sustaining unprecedented battlefield survival.

In my previous testimonies, I have articulated the important role that our MTFs have in ensuring that our personnel have the vital skills and clinical competencies to save lives on the battlefield. These military commands are our training and surge platforms where we prepare and then rapidly surge medical forces when needed. They provide peacetime healthcare as one of several ways to preserve clinical skills, but that is not their primary purpose. They are readiness and force projection platforms. Combined and integrated within Navy Medicine's readiness commands and structure, our personnel gain both clinical competencies and develop required military skills in these commands.

Clinical experience sustained within these MTFs is important to operational readiness and I believe that our collective efforts within the MHS to better codify the knowledge, skills and abilities required will be important moving forward. This is critical as we implement required reforms to ensure we operate those training and surge platforms in ways that enhance readiness, rapid deployment of forces, and ultimately combat survival. As a subset of those platforms, we must also recognize that our overseas MTFs have an additional role—that of medical support to the forward deployed Naval and Marine force. They are the “ship's sick bay” for those overseas forces and are critical to our ability to keep that force on point, on station, and ready to respond. We must also recognize that our overseas MTFs directly support our forces operating forward in their area of responsibility and have unique requirements, including disaster response. All Navy Medicine commands—MTFs, education and training, research and development, public health, logistics—are focused on preparing for our next conflict.

Within Navy Medicine, we recognize the value of private and academic partnerships in areas such as trauma training. Our Navy Trauma Training Center (NTTC) operates at Los Angeles County + University of Southern California (LAC+USC) and provides our personnel first-hand clinical experience at this Level 1 trauma center. To date, we have trained over 3,100 personnel through this partnership and have added a four-day short course for our interested international partners. We are also continuing to use our agreement with the Cook County Health and Hospital Systems (CCHHS) Trauma and Burn Experience for our Navy medical personnel assigned to the Federal Health Care Center (FHCC) in North Chicago to have one to 2 month rotations in their trauma and burn units. Our military providers work hand-in-hand with the attending surgeons, residents and nurses to gain a multi-faceted experience aimed at management of the acutely injured patient. We are working to expand these types of partnerships, both domestically as well as in creating innovative collaboration exchanges with foreign partners in countries where the trauma injury mix and acuity is much greater in order to sustain our combat casualty skills for our trauma teams and improve the MHS Joint Trauma System.

I also want to reiterate the important role that graduate medical education (GME) has in maintaining an agile, ready, and proficient medical force. The training our trainees receive and the care they provide in our teaching facilities directly support readiness—including combat casualty care, humanitarian assistance/disaster response (HA/DR) and global health engagement (GHE). Our Navy-sponsored full time in-service training (FTIS) GME is the most tailorable tool for generating physicians to meet operational readiness requirements. We can shape the operationally-relevant content of training, mentor junior physicians with deployment-seasoned senior physicians, and inculcate military culture and ethos. Our programs also allow for maximum agility and responsiveness in medical specialist force generation in support of Combatant Command requirements. These programs are also some of the best in the country, civilian or military: Our leadership can look with confidence into the eyes of American families and tell them the men and women caring for their loved ones are among the best trained in the nation. When available and appropriate, we actively partner with civilian training institutions to help maintain our specialty requirements. But we recognize civilian GME cannot absorb the number of Navy's traditional specialty training requirements due to a national shortfall in residency positions, especially in some of our critical wartime specialties.

As required by the fiscal year 2017 NDAA, we, in conjunction with the DHA, Army and Air Force, are jointly working on the required oversight process to ensure

that GME program investments fully support the readiness of our personnel, service members for whom we care, and our Services' unique and joint missions. In a dynamic environment, we continue to pay careful attention to our GME portfolio to ensure we can adjust and meet changing demands.

One of the primary reasons for the high combat survivability rate we have realized is due to the heroic work by our hospital corpsmen, the Navy's largest enlisted rating. Corpsmen are responsible for delivering initial care on the battlefield or in an isolated assignment aboard a ship or submarine far from any MTF. This will continue to be true and relevant in future conflicts as well. Well trained and experienced corpsmen are critical to combat survival in all domains where the Navy and Marine Corps operate. Our ability to provide top quality training and a robust follow-on clinical experience for our hospital corpsmen will most certainly drive the survivability of combat casualties in any future conflicts. To this end, we are changing and improving the training of our corpsmen at HM "A" school at the Medical Education and Training Campus (METC) in San Antonio, Texas. Our curriculum changes are focused on providing ready and relevant training that will prepare these personnel to manage the continuum of care in high threat complex environments most likely to be encountered by our sea-based expeditionary Navy and Marine Corps forces. In parallel with improving our foundational and follow-on clinical training, we are working closely with the DHA to ensure our other advanced medical specialist training programs conducted at METC achieve or maintain civilian equivalent academic accreditation and credentialing opportunities. I am committed to helping ensure that our corpsmen get the industry equivalent certifications and licensure they have earned. These credentials will further elevate the quality of care provided as part of our commitment to American families and will help our corpsmen when they transition back to the civilian sector with industry-recognized and valued skills.

Another important component of readiness comes from our commitment to GHE. These efforts support the Navy's global reach and forward presence by fostering and sustaining cooperative relationships with allies and international partners. GHE activities have become valued and integral assets supporting Combatant Commanders' priorities, including participation in humanitarian civic action (HCA) missions. USNS MERCY (T-AH 19) deployed in support of Pacific Partnership 2016, the largest annual multilateral, multi-service disaster relief preparedness mission conducted in the Indo-Asia Pacific area of operation. Medical, dental, veterinary, and public health services, along with engineering and disaster response training and medical education were provided in Timor Leste, Philippines, Vietnam, Palau, Malaysia and Indonesia, all strong partners in the Pacific and critical to our efforts to ensure peace and economic stability in that part of the world. The medical team provided direct medical and dental care to over 9,500 patients and performed 343 surgeries aboard MERCY. I was aboard MERCY in Malaysia and had the opportunity to see firsthand the multilateral cooperation, training and subject matter expert exchanges.

Continuing Promise 2017, a HCA mission currently underway in the Caribbean, Central and South America, is being conducted with USNS SPEARHEAD (T-EPF 1), an expeditionary fast transport vessel used to transport personnel and equipment. Embarked are medical personnel who are working with host nation counterparts and health professionals in Guatemala, Honduras and Colombia. This mission employs an expeditionary approach with our teams being transported ashore to provide care. An estimated 15,000 people will be provided a variety of medical services.

GHE missions are often referred to as "soft power" and in many cases the exact impacts are hard to quantify. While it is difficult to measure good will, in almost every theater and country where we execute these missions, we see increased access, increased transparency and interoperability, along with increased opportunities for those partner nations to contribute to regional security and stability.

Our personnel must also be prepared to support efforts associated with public health emergencies and augment whole of government efforts as the largest Federal medical force. Navy Medicine actively supported the Department of Defense inter-agency efforts to address the Zika virus outbreak to include adapting the Centers for Disease Control and Prevention's Zika Action Plan for use at Navy and Marine Corps installations. As part of this plan, the Navy Entomology Center of Excellence (NECE) conducted installation technical assistance visits to assess the comprehensive mosquito vector controls necessary to reduce the risk of disease transmission. The Navy and Marine Corps Public Health Center (NMCPHC) developed timely educational material for beneficiaries, with emphasis on pregnant women and women of childbearing age to help decrease the risk of microcephaly. Commanders quickly promulgated force health protection guidance to best protect operational

Sailors and Marines as concerted efforts actively monitored for and tracked confirmed cases.

Navy Medicine continues to collaborate and coordinate with the Services and interagency partners to mitigate the threat of Zika virus to beneficiaries through policy, prevention, and response. Our teams made significant contributions toward Zika virus and blood screening diagnostics. The Naval Medical Research Center (NMRC) developed a confirmatory Plaque Reduction Neutralization Test which is currently the only DoD diagnostic laboratory facility to utilize this advanced capability and that has helped decrease the burden of tests sent to other already burdened Federal and State reference laboratories. The test is necessary to confirm positive serology for the Zika virus and also provides rapid, in-house results to support our personnel engaged in sustained expeditionary operations in support of a high operational tempo. Furthermore, to diminish the risk of a tainted DoD blood supply, the Navy Blood Program established Zika testing at designated blood donor sites.

IMPROVING HEALTH, OPTIMIZING CARE AND DRIVING CHANGE

Our Sailors and Marines are the most highly trained, educated and specialized force in our Nation's history—and each is essential to the mission. The demand to keep them healthy and on the job has never been greater. At the same time, they must be confident that their family members will be well cared for when they are deployed. In addition, the healthcare industry and practice of medicine are rapidly changing and this evolution continues to impact military medicine. Our patients have more choice than ever, with very different expectations. Their healthcare choices are driven by convenience, experience of care, and technology. These realities are fundamentally changing the way healthcare is delivered. For us, to remain engaged, relevant, and maintain visibility of the health of the force, we continue to partner with our beneficiaries to meet their needs. We are making progress, but more work is needed and we are committed to making those improvements. I continue to assert that the direct care system is the epicenter of these efforts. We can best support our beneficiaries and maintain visibility of their health and readiness when they come to us for their care. The MHS leadership understands this imperative and we will be leveraging the economies associated with greater standardization consistent with provisions in the fiscal year 2017 NDAA.

Transformation to a high reliability organization (HRO) remains a major priority. Reflective of the variability that is inherent in American healthcare, we also have variability in healthcare and that impacts readiness. Our journey toward high reliability is our response. As a HRO, we have centered our work on improving clinical outcomes and coordination of care, enhancing access, leveraging technology and achieving the highest level of patient safety. To support these enterprise-wide efforts, I have assigned a flag officer to serve as Navy Medicine's chief quality officer to directly oversee and streamline our patient safety, quality and high reliability efforts.

In addition, we have also assigned chief medical officers (CMOs) at our regional commands and MTFs to help drive change needed for HRO transformation at the deckplate. Navy Medicine is organizing several clinical communities—multidisciplinary teams comprised of stakeholders from each level of our organization—each organized around a specific clinical community (i.e. women's health, surgical services, dental) to improve innovation, foster collaboration, eliminate unnecessary variability, and reduce redundancy. In addition, we are fully engaged with the MHS to measure and monitor performance using the Partnership for Improvement (P4I) dashboard and continue to work with leading civilian healthcare organizations in our HRO journey.

Convenient, accessible care is fundamental to our system. We recognize that if our patients confront challenges in making an appointment, contacting their provider or refilling a medication, they will seek their care elsewhere. My goal is to provide "frictionless care" focusing on: (1) promoting additional options for accessing care without requiring a visit to the MTF; (2) when a visit is needed, standardizing appointing processes; and (3) measuring our performance in meeting the needs and expectations of our patients. Navy Medicine should be their provider of choice and, when needed, our MTFs should be the place where our beneficiaries want and choose to obtain their care.

The reality is that a "visit" is no longer limited to a face-to-face interaction with a primary care provider and many needs don't require a visit to the provider. Our beneficiaries, over 815,000 of whom are enrolled to our Medical Home Port (MHP) clinics, now have the option of receiving care through multiple means conveniently, on their schedule and at the appropriate place of care for their needs. Our patients

have busy lives and we know they have options for receiving their care. We are increasing access and options for them through in-person visits, telephone consults, securing messaging with their PCM or triage and self-care advice with the nurse advice line. We have expanded the capabilities of MHP to include appointments with a growing number of embedded specialists such as behavioral health providers, clinical pharmacists, pain management experts and health educators.

All of the Services are utilizing a “First Call Resolution” policy which addresses warm hand-offs between appointing and clinic personnel any time an appointment is not available that meets the patient’s preferences. When our enrollees call for primary care appointments, their requests will be addressed on the first call. We provide an appointment or offer prompt phone consultation with a nurse or other team member to assist in arranging needed care. Our patients will not be asked to call back at another time. Secondly, our “Simplified Appointing” policy enhances appointment availability and makes obtaining and booking appointments easier. While the MHS goal for same-day/next-day access is within 24 hours, Navy sets an internal stretch goal of 0.5 days in order to provide same day care as much as possible throughout our enterprise. We monitor the success of these many initiatives, like many high-performing civilian health systems, through beneficiary experience of care survey results, and adding specific questions to the new Joint Outpatient Experience Survey (JOES) which examine the ease of making appointments, satisfaction with wait times, and whether our patients were asked to call back for an appointment.

At a time when our patients have more choice than ever for care alternatives, they are choosing us and that allows us to maintain visibility and relevance over the health of the force. Approximately 97 percent of primary care and urgent care is done in the MTFs, and I am encouraged by the progress we are making as evidenced by some of our key performance metrics. In fiscal year 2016, Navy Medicine increased enrollment in our MTFs by 3 percent and concurrently cut the appointment wait times—both for 24 hour and future appointments—realizing 17.4 percent and 23 percent improvements, respectively. We are seeing better utilization of emergency department (ED) care among our enrolled beneficiaries with the average number of ED visits for primary care reasons decreasing 8.2 percent in the purchased care system. Furthermore, over 425,000 of our enrolled beneficiaries are now connected to secure messaging and they are sending, on average, over 30,000 messages monthly to their providers.

Recognizing that we have no higher priority than keeping our service members medically ready, Navy Medicine has tailored our MHP model for the operational community so more Sailors and Marines receive the same convenient access to care including integrated behavioral and psychological health resources. We currently have 28 Marine-Centered Medical Homes and five Fleet-Centered Medical Homes, a combined increase of ten from last year.

In October 2016, Navy Medicine launched a Value-Based Care pilot at Naval Hospital Jacksonville. In selecting Jacksonville, we conducted a population and system needs analysis of direct care and purchased care data. Diagnosis codes were used to target high volume conditions, with active duty impact, high cost (either per encounter or by volume), patient satisfaction, and readiness (both medically ready and ready medical force). Purchased sector care volume and cost were also factored into selecting the conditions for this phased pilot. Low back pain, osteoarthritis, diabetes, and pregnancy were selected as the four medical conditions.

The command formed integrated practice units (IPUs) comprised of physicians, nurses, ancillary support staff, behavioral health providers and other specialties that established evidence-based, standardized care pathways for each of these conditions. In an IPU model, care is administered along a continuum that simultaneously mobilizes all providers and other healthcare professionals associated with a patient’s care, resulting in an impactful level of coordination. In this model, the patient is a key part of the treatment team. The improved coordination between the patient and a multidisciplinary healthcare team has led to improved outcomes, patient satisfaction, and a quicker return to duty for our active duty. I am encouraged by the commitment from our staff and the enthusiastic response from our patients. As the pilot progresses through fiscal year 2017, we will be carefully assessing how the Value-Based Care model impacts the experience and convenience of care for our patients, the use of technology to support their needs, and our ability to control the cost of care. This approach to healthcare delivery is unique such that we have begun collaborating with Harvard Business School’s Institute for Strategy and Competitiveness, at their request, to document our pilot a case study as a best practice in healthcare.

The evolution in healthcare, coupled with the expectations of our tech savvy Sailors, Marines and their families, make it imperative that we leverage the most appropriate technology acceptable and useful to them. Virtual Health (VH) enhances

readiness and health, and improves the patient experience by facilitating how and when care is provided. Importantly, VH helps to mitigate the tyranny of time, distance and location—improving access to care for those in isolated sites. For Navy Medicine, as an expeditionary medical force, these capabilities are particularly important as Navy and Marine forces deploy around the world. By leveraging VH, we are now providing enhanced care that would not have been available just 5 years ago to our Sailors and Marines operating forward.

Our HELP (Health Experts On-line Portal) at the Naval Medical Center Portsmouth continues to provide specialty and subspecialty consultations to Navy's afloat commands as well as our MTFs in the U.S. and overseas. HELP is being expanded to the Navy Medicine West area of responsibility this year. We are also leveraging current capabilities including tele-radiology and tele-dermatology support to MTFs and operational platforms in Europe and Bahrain, as well as tele-radiology support to providers in Djibouti. Our tele-critical care (TCC) at Naval Medical Center San Diego supports Naval Hospitals Camp Lejeune and Camp Pendleton with plans underway to provide capability this year to Naval Hospital Guam and our Role 3 Multinational Medical Unit in Kandahar, Afghanistan. There are tremendous opportunities associated with bringing care to our patients as part of our pursuit to improve the convenience of care. Earlier this year, we launched our Navy Medicine mobile application to better support our beneficiaries. Moving forward, we will continue to build on this platform throughout Navy Medicine to ensure our patients have access to a convenient, patient-centered mobile capability.

Military medicine deployed a new electronic health record (EHR), MHS GENESIS, at its first site early this year. A project of this scope and magnitude is ambitious; however, the opportunity to substantially enhance the delivery of care is significant. The Services, DHA and Defense Healthcare Management Systems Program Executive Office are working closely to finalize configuration for initial operating capability (IOC). Naval Hospitals Bremerton and Oak Harbor are scheduled for IOC deployment later this year. MHS GENESIS will be used in our MTFs, onboard our afloat commands, and in the field with Marine forces, to drive standardization while providing one platform to access accurate healthcare data worldwide. In addition, this new EHR will maintain and further enhance interoperability with Veterans Administration (VA) and private sector systems, ensuring compatibility with the standardized healthcare data framework and exchange standards so that service members' and beneficiaries' medical records are readily accessible by all of their providers.

Navy Medicine delivers worldwide, evidence-based mental healthcare for Sailors, Marines, and their families across the continuum of care. Evaluation and treatment services are available in multiple platforms and locations, with ongoing efforts to further improve access to services for our beneficiaries. The Behavioral Health Integration Program (BHIP), embedded within our Medical Home Port clinics, provides a pathway to access mental health services and has continued to see an increase in demand enterprise-wide. Placement of psychological health providers in MTF ED settings has streamlined referrals to specialty mental healthcare and reduced wait times. In addition, we are completing our roll-out of the Tri-Service Behavioral Health Data Portal (BHDP) at all our MTFs. BHDP is a software-based clinical evaluation tool that provides improved patient tracking with and across mental health clinics, real-time information regarding Sailors and Marines' psychological health readiness and helps ensure optimal, coordinated mental healthcare.

We are continuing direct mental health support to Navy and Marine Corps operational units through a redistribution of existing personnel to high demand units. We have expanded our Embedded Mental Health (EMH) program to additional Fleet units. EMH providers deliver support and subject matter expertise directly to the operational forces by reducing barriers in accessing timely mental health evaluation and treatment. We know that psychological health impacts can be mitigated by the presence of these providers offering early evaluation, resilience training, counseling, and treatment to limit personnel losses, and in many cases result in service members returning to full duty.

There are multiple settings in which operational/embedded psychological health providers have been functioning for many years including Marine infantry, aircraft carriers, amphibious assault ships and special forces. This forward footing has been highly regarded by Navy and Marine Corps commanding officers who appreciate and have come to expect the embedded mental healthcare and ready access to counsel on psychological health matters. This directly supports our Fleet and Fleet Marine Force readiness and operational tempo. Building on our commitment to the operational forces, we have bolstered our capabilities by increasing the number of EMH personnel assigned within Fleet Forces Command, Pacific Fleet Command, Special Warfare Command, and Coastal Riverine Groups. Correspondingly, our

Operational Stress Control and Readiness (OSCAR) providers assigned to Marine Corps forces continue to provide mental health support at the Regimental, Division, Squadron, Group, and Marine Expeditionary Unit levels.

These efforts also complement important work within the Navy, Marine Corps and Defense Suicide Prevention Office (DSPO) to advance suicide prevention programs, including identifying those most at risk. We know the devastating impact that suicide has on our families and commands and our priority continues to be improving resilience and breaking down barriers in seeking mental healthcare. In an attempt to standardize clinical suicide risk assessments across all primary care and specialty mental health clinics, Navy Medicine is implementing and training providers in a single screening tool in 2017. In addition, Navy Medicine consults as a subject matter expert to the Sailor Assistance and Intercept for Life (SAIL) program which targets patients recently discharged from the hospital with suicidal ideations to ensure continuity and coordination of mental healthcare. The post-psychiatric hospital time period is particularly high risk for patients.

Throughout Navy Medicine, our commitment to preventing, identifying, educating, training and treating traumatic brain injuries (TBI) remains strong. Over 80 percent of TBIs are mild TBI, or concussion, and of these, over 80 percent are not deployment-related. We are continuing to collaborate with the other Services, DHA, and the Defense and Veterans Brain Injury Center (DVBIC) on several important components including training resources, data collection platforms and treatment methodologies. These efforts are complemented by research efforts with academic institutions directly related to improving TBI diagnosis and treatment. Our Intrepid Spirit Center at Naval Hospital Camp Lejeune recently designed and implemented a 5-week "Return To Forces" intensive TBI treatment program, tailored to the needs of Special Forces groups. Participants enter as a cohort and undergo a week-long comprehensive assessment, followed by four weeks of intensive, holistic, interdisciplinary treatment. Success rates have been good and demand has steadily been increasing. In an effort to share best clinical practices, our TBI clinic at Naval Hospital Camp Pendleton is developing a similar program and this model of care is being shared with the other Services.

The Navy Comprehensive Pain Management Program (NCPMP), as an integrated component of our Medical Home Port clinics, provides a patient-centered, interdisciplinary approach focusing on comprehensive and coordinated treatment of pain while also targeting opioid abuse and addiction. Our strategy, in the treatment of acute and chronic pain, continues to emphasize compliance with clinical practice guidelines, as well as prevention and education, for both providers and patients. We are also continuing to utilize tele-mentoring programs to include, Project ECHO™ (Extension of Community Healthcare Outcomes) which expands the access to pain management specialists for our primary care providers. An analysis of ECHO clinics' effect on opioid prescribing habits indicates substantial reductions in opioid prescription prevalence for patients presented in the clinics. Analyzing patients' opioid prescriptions received 6 months before and 6 months after presentation of their case at ECHO reveals the average day-supply of prescriptions fell by 10 percent after being presented and total prescriptions written to patients following their ECHO fell by 30 percent. Taken together, these observations indicate a more judicious use of opioid pharmacotherapy and more engaged management of patients receiving opioid prescriptions.

We have also expanded our focus on long-term opioid therapy safety (LOTS) by: (1) increasing the education of our providers using the Joint Pain Education Program (JPEP) modules specifically targeted to the non-pharmacological approach to pain management; (2) developing policy for our MTFs that details the requirements consistent with evidence-based procedures to improve clinical outcomes and patient safety for those receiving long-term opioid therapy; and (3) expanding our clinical capabilities to provide comprehensive, multidisciplinary pain management modalities as alternatives to opioid therapy. Our requirements align with those of the Centers for Disease Control (2016 Guideline for Prescribing Opioids for Chronic Pain, 2016) and DoD/VA clinical practice guidelines. As NCPMP is fully stood up at seven MTFs in 2017, we will monitor restoration of function, patient safety through the percentage of patients on long term opioids, pain complexity, and continuity of care for the chronic pain population. Additionally, we will assess the utilization of services within the ED, outpatient and inpatient settings.

Complementary and integrative medicine (CIM) modalities are provided by Navy Medicine at various MTFs, with access to a variety of specific therapies depending on provider training and availability. Our NCPMP incorporates CIM strategies as part of a multidisciplinary approach to treating pain including education on acupuncture, spinal manipulation, massage, meditation and movement therapies. Our successful programs like the Naval Medical Center San Diego's (NMCS) "Mind

Body” Medicine (MBM) integrates CIM approaches and targets beneficiaries with chronic health conditions to gain control over their stress, improve their resilience and optimize their mind and body to best aid in their own recovery. To date, over 372 military personnel have been trained in the MBM curriculum with many bringing the training with them to operational platforms. Program evaluation data show that participants in the various MBM programs at NMCSD greatly value the experience, have created new healthy habits and made significant improvements in psychological health. NCPMP and MBM leaders are actively developing integration of MBM within all levels of the NCPMP stepped-care model.

Navy Medicine implemented a pilot to actively manage Sailors and Marines on medical restricted duty. The Temporary Limited Duty Operations Program (TEMPO) started as a four month pilot at Naval Health Clinic (NHC) Cherry Point in June 2015 and resulted in an average reduction of 2.5 months on limited duty per service member. The program is currently being implemented across Navy Medicine with our focus on improved quality of care and earlier decisions on outcomes. All of us have a vested interest in ensuring all ill or injured service members are evaluated and treated in an expeditious nature, so they can return to duty at the earliest possible date. As a result, TEMPO is designed to provide the member time to heal, but with a multidisciplinary team approach overseen by both the member’s command and the medical system, fostering Navy Medicine’s mission to deliver a fit and effective fighting force.

Since last year, we have also fully deployed LIMDU SMART (Limited Duty Sailor and Marine Readiness Tracker) at all our Navy MTFs. This IT solution provides improved visibility on temporary limited duty personnel and enables more active management of these service members.

In support of the Navy’s Sexual Assault Prevention and Response (SAPR) program, we initiated inter-Service training for our Sexual Assault Medical Forensic Examiners (SAMFE); an 80-hour SAMFE–A training course for healthcare providers. Our SAMFE providers require specialized training and clinical experience in medical-forensic evidence collection and treatment of sexual assault victims and suspects. This multidisciplinary and collaborative effort was undertaken to provide a tool to ensure our military providers conducting the Sexual Assault Medical Forensic Exam are uniformly trained, competent, and informed to the current standards of practice and state of the science.

I want our Sailors, Marines and families to know that we are partnering with them in improving their health and wellness. Adopting a lifestyle of fitness, healthy eating, responsible use of alcohol and tobacco free living (to include electronic nicotine delivery systems such as e- cigarettes) can help reduce the incidence of disease and injury—and keep our personnel ready and on the job. Our efforts to reduce tobacco use include screening for tobacco use during every medical and dental visit, encouraging and assisting our active duty and beneficiaries to quit using FDA-approved medications and with counseling and promoting tobacco free living and work sites. Led by our Navy and Marine Corps Public Health Center, we also developed a robust tobacco free living website and produced new videos to encourage tobacco cessation free living. Simply put: Readiness, fitness and health are inextricably linked.

BUILDING, SUSTAINING AND VALUING THE NAVY MEDICINE WORKFORCE

Navy Medicine is comprised of talented, dedicated and diverse healthcare professionals who serve around the world, in all environments, to support our Navy and Marine Corps forces. Our active duty and reserve military personnel—both officers and enlisted—and our Navy civilian colleagues are mission-ready and fully engaged in supporting our Navy and Marine Corps, regardless of location or assignment. They are fulfilling the promise we make to American families to provide the best care and support possible to those who serve. To this end, our human capital strategy must continue to emphasize the importance of recruiting, retaining, and rewarding our personnel.

We are grateful to Congress for the sustained funding of both active component (AC) and reserve component (RC) recruiting and retention incentives for Medical Department officers. These resources continue to be crucial to our efforts to attract and retain high quality personnel. In fiscal year 2016, Navy Recruiting was successful in reaching 100 percent of the overall AC goal for Medical Corps, Dental Corps, Nurse Corps, Medical Service Corps and Hospital Corps. Correspondingly, overall AC manning in each Corps is good; however, we continue to focus on several challenging specialties within each Corps including: Medical Corps (general surgery, family medicine and psychiatry); Dental Corps (oral and maxillofacial surgery); Nurse Corps (critical care); Medical Service Corps (medical technology); and, Hos-

pital Corps (submarine and dive independent duty corpsman, and Fleet Marine Force Reconnaissance). Careful assessment of these and other specialties is important as our support requirements to the Marine Corps increase and we expand programs such as embedded mental health in Fleet units.

While overall RC recruiting efforts attained 78 percent of the fiscal year 2016 Medical Department goal, accessing RC Medical Corps officers, largely through the direct commission market, remains a challenge. Overall RC Medical Corps manning is 85 percent; however, specialty shortfalls exist for orthopedic surgery and general surgery. To address these needs, Navy Recruiting Command will focus on residents in these specialties for the Training in Medical Specialties (TMS) program, which is offered to trainees who are now in or categorically matched to a residency program in a critical wartime specialty needed by the Navy Reserves. As an enhanced incentive, the TMS program increased student loan repayment to \$210,000 from \$50,000 (while the stipend amount remains the same at \$2,239/month). The Navy Recruiting Command's goal is to reach a younger physician audience by targeted recruiting efforts with the TMS program. For the RC Nurse Corps, the stipend program as well as retention and recruiting bonuses have had a significant impact in improving manning in the perioperative nurse, certified registered nurse anesthetist and mental health nurse practitioner communities. Navy Recruiting Command, in conjunction with the Navy Reserve, continues to emphasize enhanced incentives and targeted new programs to attract these medical professionals, recognizing the challenges inherent in an improving healthcare labor market.

A healthy and diverse student accession pipeline is vital to Navy Medicine. In fiscal year 2016, a total of 48 Medical Corps officers graduated from Uniformed Services University of the Health Sciences (USUHS), 193 entered active duty from the Health Professions Scholarship Program (HPSP), 18 from the Health Services Collegiate Program (HSCP), 30 from the Navy Active Duty Delay for Specialist program, and 13 from the Financial Assistance Program. Additionally, 82 Dental Corps officers entered active duty from HPSP and 26 from HSCP while eight Medical Service Corps officers entered from HPSP and 47 from HSCP. Seventy-two Nurse Corps officers entered active duty from the Nurse Candidate Program.

Within Navy Medicine, vibrant education and training programs are essential to providing confident and well-trained healthcare providers in any operating environment. Our leaders and the American public expect nothing less. We also recognize that training and credentialing opportunities serve as an important retention tool for retaining our best and brightest. Our officer programs are reviewed annually, and executed to ensure the requisite provider expertise to support the Navy and Marine Corps operational mission. Enlisted medical education and training complement the team approach to healthcare. In this regard, we continually review and adjust initial and advanced skills curricula to best meet current and future requirements. The CNO has clearly articulated his priority that all of us in the Navy must "achieve high velocity learning at every level." For us, this imperative includes leveraging cost-effective technologies, including medical modeling and simulation capabilities, to accelerate learning and reduce re-work.

Our Navy civilians have important responsibilities—providing care, conducting research, maintaining our clinical and business operations—but one of the most important jobs is the training and professional mentorship they provide to our military staff. Our civilians represent the expertise and continuity in our MTFs, labs and supporting commands as the military staff regularly rotate to other assignments and locations.

The healthcare occupations employed by Navy Medicine are in high demand in the private sector; therefore, we utilize an aggressive enterprise and command-level retention and recruitment strategy for these positions. We continue to leverage authorized flexibilities by utilizing several special hiring authorities including Expedited Hiring Authority (EHA) for Certain Health Care positions, and Direct Hire Authority (DHA) for hard-to-fill healthcare positions. In fiscal year 2016, 378 positions were filled at Navy Medicine commands using EHA and DHA authorities. We recognize, however, that like other Department of Navy activities, our most significant demographic concern is an aging workforce with 30 percent of our civilians eligible for early or voluntary retirement. Navy Medicine uses the flexibilities and authorities given to us to mitigate losses due to retirement including Physician/Dentist Pay Plan Special Salary Rates and recruitment incentives.

In support of the CNO's Navy Civilian Workforce Framework, I directed the establishment of a Navy Medicine Civilian Corps Chief, similar to the leadership model in place for our other Medical Department Corps, to strengthen the role of leading and managing our 11,400 civilians, particularly in areas of recruiting, training and workforce development.

ADVANCING CUTTING-EDGE RESEARCH AND DEVELOPMENT

Navy Medicine Research and Development (R&D) is essential to our force health protection mission and a key component to advancing global health engagement priorities. The facilities in the United States and overseas, staffed with talented researchers and clinicians, are vital to Navy Medicine as we keep pace with new and precision-based therapies for our patients. The Naval Medical Research Center (NMRC) and its subordinate laboratories have continued to make strong progress in addressing our military relevant research priorities in all areas of the globe so that we can better protect our deployed service members. These areas include, but are not limited to, warfighter performance, combat casualty care, aerospace medicine, infectious diseases, biological defense, and undersea medicine. During my site visits throughout Navy Medicine I have had the opportunity to see firsthand the innovative work being performed by our researchers.

I cannot overstate the importance of collaborations and partnerships. They are fundamental to our work, both domestically and internationally. Our labs work extensively with outside partners, both academic and corporate, bringing in external researchers to contribute toward shared goals. Mechanisms such as Cooperative Research and Development Agreements (CRADAs), Material Transfer Agreements, Memoranda of Agreement, and Memoranda of Understanding now number in the hundreds and also provide a mechanism to support and accelerate Navy research—all focused on protecting, treating, and enhancing the health and performance of Sailors and Marines.

A common mission for our OCONUS labs is to provide direct surveillance and subject matter expertise to host nation governments, enhancing regional security and stability through health engagements. Our commands work closely with their host nations' Ministries of Health and Ministries of National Defense to identify and prioritize regional disease threats of relevance to them and especially to our forces. Research efforts leverage these relationships to both strengthen host nation medical capacity and economize the efforts of DoD researchers.

Our Navy Malaria Program continues to make progress in the development of a malaria vaccine. Our researchers focus on safety, tolerability, and efficacy results from clinical trials. We are partnering with Walter Reed Army Institute of Research (WRAIR), DoD OCONUS medical research laboratories, as well as government, academia, private foundations and biotechnology partners to develop a malaria vaccine to prevent malaria morbidity and mortality in military personnel and in vulnerable populations world-wide. In addition, NMRC-Asia, headquartered in Singapore, is conducting anti-malarial drug efficacy and resistance studies in Thailand, Cambodia and Vietnam designed to evaluate optimal anti-malarial regimens.

We are also actively engaged in initiatives to develop therapeutic antibodies to militarily relevant diseases caused by viruses such Zika, Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV), Chikungunya and others. This research supports the development of effective therapeutic antibodies for human use that can be prepared in as little as 3 months.

We are partnering on two new initiatives to identify and counter emerging disease threats, such as Ebola, in West Africa. These programs, the Joint West Africa Research Group (JWARG) and the Joint Mobile Emerging Disease Intervention Clinical Capability (JMEDICC), seek to develop clinical and diagnostic capacities to both identify and respond to emerging disease threats. A key mission of both programs is the development of the in-country medical infrastructure to provide critical support toward the FDA licensure of therapeutics and vaccines against emergent diseases, including Ebola.

Our researchers are also engaged in partnerships in the emerging area of precision medicine. Of particular note is work underway at NMRC with Weill Cornell Medical College of Cornell University and University of California, Davis to identify risk and optimize interventions for the treatment of post-traumatic stress disorder (PTSD) and mild TBI, as well as other, more chronic or progressive medical disorders. Their work in developing predictive and customized models derived from population data can help build resilience and target interventions specific to individuals at risk as well as those who have previously suffered a traumatic event.

WAY FORWARD

As the Navy Surgeon General, I have the privilege of meeting with Navy Medicine shipmates serving in the Fleet, with the Marines and in our MTFs, research labs and training commands. It's inspiring to see the outstanding work being done to support Sailors, Marines and their families. I always, however, reiterate that the demands on Navy Medicine will continue to increase. The operational tempo of our Navy-Marine Corps remains high, with naval forces operating forward around the

world. We have no greater calling than to ensure we are doing all we can to provide the best care our Nation can offer and do all in our power to return home alive, safe, and well those who have volunteered to defend our freedom. Whether on day one of combat, alongside them around the world, or ensuring they are healthy and ready here at home, we have no greater priority. This is what sets us apart from all others. I take seriously our commitment to ensure that the men and women of Navy Medicine have what they need and are able to do what they must to honor that trust placed in our hands to safeguard the health and wellbeing of those in uniform, one day and if at all humanly possible, returning them home safely to those they love with the gratitude and admiration of a thankful nation for their sacrifice.

Senator COCHRAN. Thank you, Admiral Faison, for your opening statement. I now recognize Lieutenant General Mark Ediger, Surgeon General of the Air Force, for an opening statement.

STATEMENT OF LIEUTENANT GENERAL MARK EDIGER, SURGEON GENERAL, UNITED STATES AIR FORCE

General EDIGER. Thank you, sir. Chairman Cochran, Vice Chairman Durbin, and distinguished members of the subcommittee, thank you for this opportunity to testify before you today. We are grateful for your steadfast support to the Military Health System, including Air Force Medicine, and to all of those we serve.

The dynamics of military operations across the combatant commands demand that today's airmen innovate and perform reliably at a high tempo. In Air Force Medicine, we are adapting our capabilities to enhance the health and performance of airmen by taking our support directly to the airmen.

We are also changing our deployable and aeromedical evacuation capabilities to bring more advanced care into the operational environment as part of the Joint Team.

Today, we have 726 medical airmen deployed in 31 nations. Our current readiness challenge is to build our capability and capacity to support agile military operations across broad expanses of geography, while also sustaining the ability to deploy field hospitals in support of large scale combat operations. Answering this challenge requires the increased flexibility of our deployable medical teams.

Current operations in CENTCOM and AFRICOM have expanded requirements for agile teams trained and equipped for forward trauma resuscitation and damage control surgery along with critical care, performed in near operating forces often without the benefit of the field hospital.

In 2016, an Air Force medical team supported coalition forces under this construct and performed over 120 trauma resuscitations in a 7-week period, while successfully employing innovative trauma resuscitation techniques in a pre-hospital setting.

We recently adapted Air Force mobile field surgical and critical care teams to this requirement, and completed successful operational tests. As part of the joint effort, we are currently training and equipping teams to be dually capable of this kind of austere agile support, and have worked within the Air Force Expeditionary Medical Support System, or EMEDS structure.

Additionally, we are taking actions this year to train and equip teams to deliver in-flight surgical resuscitation capability.

As research and innovation continue to enable more advanced care in the operational setting, we must keep our deployable med-

ical teams at peak proficiency in trauma, emergency medicine, and critical care techniques.

Partnerships that enable our deployable medical professionals to work within institutions outside the military, such as partner trauma centers and academic medical centers in the United States and in the United Kingdom, will continue to grow in importance.

Since 2012, we have also gained experience from embedded medical support in mission areas that impose unique demands on airmen, including special operations, remotely piloted aircraft operations, intelligence operation centers and personnel recovery.

We are now building plans to apply what we have learned in those areas more broadly across the Air Force, with a focus on units and career fields under high stress and demand, such as aircraft maintenance.

Our concept for this adaptation involves multidisciplinary medical teams working beside our airmen in their duty sections to enhance performance, improve fitness, improve health, build stress management skills, and prevent injuries.

In 2015, Air Force Medicine committed to a new approach to safe care, quality outcomes, and a greater experience of care for the 1.2 million patients enrolled in medical homes and our hospitals and clinics. We call this approach "Trusted Care." Through it, we are employing the same principles that were applied in Air Force flying operations to produce a dramatic reduction in major flight mishaps over the past 8 years.

The principles relate to clear purposeful team communication, vigilance for risk to patient safety, a system approach to variance, a responsibility to report hazards, a team approach to mitigating risk, and continuous process improvements.

Our hospitals start their days with patient safety rounds. We measure and track patient safety at every level. We utilize these processes to enhance safety across the system, all in coordination with comparable efforts within the Military Health System.

We are actively changing education and training curricula to develop medical airmen with skills in applying these principles and leading a patient-centered culture of safety.

The implementation of the new electronic health record at Fairchild Air Force Base is the first step of what will be a transformational tool for our healthcare teams but also for all of those we serve.

Air Force Medicine remains committed to the health, safety, performance, and resilience of those we serve across the Joint Force. We do this in close collaboration with our partners in the Military Health System. We are in the midst of mapping fundamental changes to our operations in order to ensure that we provide the capability and capacity to provide the innovative expeditionary medical and aeromedical evacuation support for current and future contingency operations.

I thank the committee for your support and dedication to the welfare of the extraordinary people we are privileged to serve in the Military Health System. I look forward to answering any questions from the committee. Thank you.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL (DR.) MARK EDIGER

Chairman Cochran, Vice Chairman Durbin, and distinguished members of the Subcommittee, thank you for this opportunity to testify before you today.

In Air Force Medicine, we are integral to the team of Airmen integrated into the Joint team defending our Nation through a broad array of capabilities, overcoming diverse challenges in demanding missions around the world. Today approximately 200,000 airmen are engaged in special operations, combat air operations, strategic reconnaissance, space operations, cyber operations, rapid global mobility, homeland defense, and nuclear deterrence in direct support to the warfighter in every region of the world. The Air Force is performing these tasks with 38 percent fewer active duty Airmen and 37 percent fewer aircraft than during DESERT STORM.

We ask much of our Airmen, and place great responsibility on them. In return, the Air Force Medical Service has a great responsibility to provide the best possible health services for our Airmen and their families; provide fit, healthy and medically ready Airmen; and sustaining an innovative expeditionary medical and aeromedical evacuation force in support of ongoing and emergent contingency operations.

As today's Airmen meet the challenges of expanding operational capabilities evolving to meet changing threats, we call upon them for precise performance, technological prowess, innovation, sustained vigilance, physical endurance, spiritual strength, and mental resilience.

Today's Airmen are doing what the mission requires but there are clear signs of stress on the force, including 9 years of rising suicide rates and diminished retention within heavily tasked career fields.

The strategy for Air Force Medicine supports the Air Force Strategic Master Plan and is integrated with Military Health System strategic lines of effort. Focus areas within our strategy pertain to full spectrum readiness for the medical force, mission-specific operational outreach, high reliability health services and patient-centered, precision care. Action within the focus areas are reconfiguring our medical force to efficiently align capabilities with operational requirements, cultivating a patient-centered culture, and improving our operational agility. My comments will touch upon each of these four focus areas.

Full Spectrum Readiness addresses our greatest challenge—sustaining a ready medical force with innovative capabilities to provide advanced care and prevention anytime, anyplace. Today we have 726 medical Airmen deployed in 31 nations. Today's readiness challenge is adapting medical support to agile military operations across vast geographic expanses wherein a wounded service member may be 1,000 miles from a hospital with suitable trauma capabilities. Today's readiness challenge is also sustaining readiness for alternative conflict scenarios with potential to generate large numbers of casualties concentrated in specific locations.

Today's operations in CENTCOM and AFRICOM have increased requirements for agile surgical and critical care teams trained and equipped for forward trauma resuscitation and damage control surgery in a pre-hospital (field) environment. We have completed successful operational tests of trauma teams tailored to this requirement. We are currently training and equipping teams such that enhanced capability and capacity for surgical and critical care in austere environments will be ready by the end of this year.

During operational testing in 2016, such teams working in a shelter of opportunity in Africa surgically resuscitated and saved a wounded U.S. service member and an allied service member, each of whom arrived stable at hospitals in Europe after aeromedical evacuation over a distance of 1,000 miles.

An Air Force Special Operations Surgical Teams (SOST) recently deployed to the vicinity of Syria in support of coalition forces. Finding that casualties had overwhelmed local civilian hospitals, SOST rapidly converted four buildings into triage, treatment, and surgical rooms. In just seven weeks, the team completed over 100 trauma resuscitations and treated more than 1,000 casualties. The SOST also saved four wounded coalition troops through use of resuscitative endovascular balloon occlusion of the aorta (REBOA). This was the first reported use of REBOA outside a hospital setting. REBOA, using an FDA approved balloon catheter invented by an Air Force Surgeon, Dr. Todd Rasmussen, is gaining use in trauma centers internationally. The innovative use of this tool in the field represents a new opportunity to reduce death due to traumatic hemorrhage.

The Air Force continues the development and refinement of our Expeditionary Medical Support Health Response Teams (EMEDS-HRT), an evolution of our combat-proven and scalable Expeditionary Medical Support (EMEDS) system. EMEDS-HRT provides emergency care within one hour of arrival, surgery and critical care within six hours, and hospital capability within 12 hours of arrival.

In 2016, the Air Force deployed EMEDS-HRT in joint exercises with East Asian partner nations simulating a major natural disaster in the Pacific. The scope of services in HRT is tailored to the mission, adding specialty care such as obstetrics/gynecology and pediatrics for humanitarian assistance or disaster relief missions.

The Air Mobility Command has continued to refine and exercise the Transport Isolation System developed and fielded during the Ebola crisis in West Africa. This system enables response to an infectious disease crisis through capability to safely treat and transport multiple patients with infectious diseases of high concern in the C-17 and C-130 aircraft. Through a research and training partnership with the University of Nebraska Medical Center, we continue to build our capabilities in this area.

To build and sustain teams capable of advanced care in operational environments and safe aeromedical evacuation over great distances, we apply standards for clinical aspects of readiness as we manage our medical force within a program known as Sustained Medical and Readiness Trained (SMART). To meet these standards, we employ partnerships with multiple trauma centers outside the Department of Defense (DoD) within the U.S. and within major medical centers in the United Kingdom to ensure our deployable teams maintain clinical skills required in contingency operations. Most of our partner institutions have a full-time presence of deployable Air Force clinicians in addition to rotational clinicians from Air Force hospitals. Included are three level one trauma centers serving as Centers for Sustainment of Trauma and Readiness Skills (C-STARS), the University of Maryland's R Adams Cowley Shock Trauma Center in Baltimore, the Saint Louis University Hospital, and the University of Cincinnati Medical Center, as well as level one trauma centers at the University of Nevada, the University of Alabama-Birmingham, the University of Miami Ryder Trauma Center, and University of California-Davis. We also have a large contingent of Airmen providing trauma care at Brooke Army Medical Center in San Antonio. Multiple Air Force hospitals and clinics maintain local partnerships to enable commanders to manage readiness through apportioned week-to-week clinical practice. These partnerships are critical to our readiness and their importance will grow over time.

The SMART program offers expanded training opportunities for certain skills that require experience not available in our smaller military treatment (MTF) facilities. This includes skills for which a higher volume of cases is needed to remain current, or those with a greater complexity of hands-on care. The SMART program is tiered to provide commanders with options for each skill requirement. The first tier occurs at home station where medical personnel train with a standardized curriculum using routine operations and simulation-based training opportunities. The second tier utilizes local training affiliation agreements and partnerships with civilian, DoD or VA hospitals. The third tier, regional currency sites, such as the University Medical Center in Las Vegas, are utilized when Tier 1 or Tier 2 opportunities are inadequate to ensure the preservation of essential medical skills.

We are responsible for enabling Airmen to successfully sustain health, fitness, resilience and strong performance across the spectrum of operations in an Air Force whose capabilities are in great demand. Since 2012, we have gain experience from embedded medical support in mission areas including special operations (SOCOM's Preservation of the Force and Family), remotely piloted aircraft operations, intelligence operations centers and personnel recovery. We are now building plans to apply what we have learned from embedded medical support to apply medical outreach more broadly across the Air Force mission employing expertise in exercise physiology, physical therapy, behavioral health, nutrition, and wellness.

An example of our experience with embedded medical support comes from the 480th Intelligence, Surveillance, and Reconnaissance Wing (ISRW), a globally dispersed unit that specializes in time-dominant intelligence fusion. This Wing has employed embedded medical and chaplain support continuously since 2012 as its combat mission has grown considerably in complexity and scope. The embedded support interacts with Airmen individually and works across multiple domains to fix the processes that negatively impact Airmen, while increasing operational effectiveness of the Wing. The embedded presence ensures an intimate knowledge of the problems facing Airmen, a full understanding of the mission, and awareness of the impacts for Airmen. With this unique perspective, the embedded support can quickly advise and assist Airmen under stress, and coordinate specialty care when needed.

An Airmen Resiliency Team's combined operational and medical knowledge, along with ties to research communities, dramatically shortens the research and development loop for new training and techniques in identifying and treating mental health challenges. Human Performance Optimization and Human System Integrations projects by the embedded 480th Intel Wing teams have led to a 6 percent reduction in errors while actually increasing production. The 480th ISRW ART is currently

guiding operationally relevant research at the U.S. Air Force School of Aerospace Medicine, the Air Force Research Laboratory, Uniformed Services University of the Health Sciences, and Naval Medical Research Unit Dayton.

Air Force primary care is provided in Air Force Medical Home clinics, consisting of 239 clinics at 76 installations. Air Force Medical Home clinics include family medicine, pediatrics, internal medicine, flight medicine, and associated graduate medical education (GME) clinics. There are 1,085,779 beneficiaries enrolled in Air Force Medical Homes. Overall satisfaction with the healthcare delivered at Air Force Medical Groups has consistently scored at or above 95 percent, a strong rating but one we strive to improve every day.

Every Air Force Medical Group provides medical support tailored to missions conducted from home station while sustaining the readiness of the deployable medical force. Every patient engagement is relevant to the performance and resilience of Airmen.

While we have made great strides in partnership with our patients through the Air Force Medical Home, we are acting on opportunities for further progress. We have increased the number of same day appointments, embedded clinical pharmacists within the Medical Home, expanded direct patient access to physical therapy, improved MiCare registration for digital interaction, and streamlined patient transfers from the Nurse Advice Line. This year, we are piloting the use of health coaches in the Medical Home to assist patients with wellness actions prescribed by their Medical Home teams such as injury prevention, fitness improvement, stress management, tobacco cessation, weight loss and healthy nutrition.

In accordance with the DoD strategy for pain management, and to reduce use of opioids, we are embracing integrative medicine by training clinicians to use non-pharmacologic tools such as acupuncture. Battlefield acupuncture or BFA, a highly effective rapid acupuncture treatment for pain, was developed by an Air Force physician and is now taught internationally. BFA has been taught in 59 classes, including 3,855 clinicians and certified 119 instructors across DoD and VA. Eighty-one percent of all Air Force Medical Groups are providing acupuncture services today. We have doubled the number of physicians trained annually as medical acupuncturists in a 300-hour acupuncture course yielding robust skills in acupuncture. The Family Medicine Residency at Nellis AFB has successfully provided an advanced acupuncture course as a popular elective, a successful initiative we are now seeking to program resources in the future with expansion to another site. Col (Dr.) Paul Crawford, the Nellis Air Force Base Director of the Family Medicine Residency and his team are collecting data to measure impacts on patient outcomes and opioid usage with promising initial results.

Air Force Medicine remains committed to improving access to primary care services. Actions in progress include additional primary care providers to enable "gap fill" contracts, improved fill rates for Medical Home positions, standards for managing schedules within the Medical Groups to meet forecasted demand, and a hub and spoke concept for filling temporarily gapped positions due to deployments.

In 2015, Air Force Medicine committed to a new approach to patient safety we call Trusted Care, employing the principles for high reliability care. These principles are the same as those applied in aviation to produce the dramatic reduction in major aviation mishaps. The principles relate to clear, purposeful team communication, vigilance for risks to patient safety, a systems approach to variance, a responsibility to report risk and a team approach to mitigating risk. Application of these principles and their inclusion in developmental training along with continuous process improvement, is a powerful combination for attaining high reliability.

As an illustration of how we apply these principles in Air Force medicine, a physician assistant with the 61st Medical Squadron at Los Angeles Air Force Base recently saved a life when he caught an error made two weeks earlier by a civilian emergency room physician. The civilian emergency room sent this patient home with routine primary care manager follow-up instructions. However, when the patient was seen by the Air Force physician assistant, he identified the patient as having a serious cardiac condition. This resulted in an emergency same-day stent surgery. By not taking the previous diagnosis for granted, and having the vigilance and independence to perform and trust his own analysis, this Airman demonstrated Air Force Trusted Care principals and saved a life.

We are an innovative system for contingency medical support, day-to-day medical support to special missions, and delivery of team-based patient-centered health services. We are engaged in strategic programming actions to meet evolving and looming mission imperatives that will potentially significantly change our configuration and scope of services. In so doing, we remain committed to Trusted Care Anytime, Anyplace in support of the national defense, our Airmen, Sailors, Soldiers and Marines and our veterans.

Senator COCHRAN. Thank you very much, General Ediger. I will now call on Ms. Stacy Cummings, Program Executive Officer of Defense Healthcare Management Systems. You may proceed with your opening statement.

STATEMENT OF STACY A. CUMMINGS, PROGRAM EXECUTIVE OFFICER, OFFICE OF THE DEFENSE HEALTHCARE MANAGEMENT SYSTEMS, DEPARTMENT OF DEFENSE

Ms. CUMMINGS. Thank you. Chairman Cochran, Ranking Member Durbin, and distinguished members of the subcommittee, thank you for the opportunity to testify before you today.

I am honored to represent the Department of Defense as the Secretary's Program Executive responsible for modernizing the military's electronic health record system, and enhancing interoperability with the VA and private sector providers.

Our mission is to transform the delivery of healthcare and advance data sharing through a modernized EHR (electronic health records) for servicemembers, veterans, and their families. To this end, DOD is committed to three equally important objectives—deploy a single integrated inpatient and outpatient electronic health record, improve data sharing with the VA and our private sector healthcare partners, and successfully transform the delivery of healthcare in the Military Health System through advanced tools that allow beneficiaries to have more control over their health care experience.

As we work towards fully deploying a modern EHR across the MHS (Military Health System), I am excited to share that we reached an important milestone. On February 7, the DOD deployed MHS GENESIS at its first patient care facility at Fairchild Air Force Base in Spokane, Washington. This was a massive effort that took the coordination, guidance, and support of multiple DOD agencies and organizations.

I would like to acknowledge the 92nd Air Refueling Wing, Air Force Medical Operations Agency, and the Defense Health Agency for their tremendous efforts to make the go-live effort at Fairchild a success.

Here with us today is the Commander of the 92nd Medical Group at Fairchild, Colonel Margaret Carey. Colonel Carey has been instrumental in coordinating pre- and post-deployment activities, and embodies the leadership qualities necessary to ensure continued success of MHS GENESIS.

In 2015, the DOD awarded a \$4.3 billion contract to the Leidos Partnership for Defense Health to deliver a modern, interoperable EHR. MHS GENESIS is a state of the market commercial off-the-shelf solution consisting of Cerner Millennium, an industry leading EHR, and Henry Schein's Dentrax Enterprise, a best of breed dental module.

MHS GENESIS is an integrated inpatient and outpatient solution that connects medical and dental information across the continuum of care. Over time, MHS GENESIS will replace DOD legacy healthcare systems and will support the availability of electronic health records for more than 9.4 million DOD beneficiaries and over 200,000 MHS personnel globally.

Deploying and implementing MHS GENESIS is a team effort. DOD brought together stakeholders from across the MHS to stand-

ardize clinical workflows across the enterprise to minimize variation in the delivery of healthcare.

Feedback from our users at Fairchild have been positive with many citing ease of use and integration into their daily work processes. Today, clinicians and dentists are documenting patient records in MHS GENESIS and ancillary capabilities, such as pharmacy, lab, and radiology, and are working as expected.

Later this year, we will deploy to our three remaining initial fielding sites, Naval Hospital Oak Harbor, Naval Hospital Bremerton, and Madigan Army Medical Center, with full operational capability for medical and dental facilities worldwide scheduled for 2022.

As the DOD transitions to MHS GENESIS, our commitment to expand our interoperability efforts with the VA and private sector providers remains unchanged. The DOD and VA are two of the largest healthcare providers in the world, and today, share more healthcare data than any other two major health systems.

In April 2016, the DOD and the VA certified to Congress that we are fully interoperable, in accordance with the fiscal year 2014 NDAA. While the Department has met those objectives, interoperability is a spectrum where data sharing and functionality can and will be improved.

Additionally, since more than 60 percent of beneficiary healthcare is provided by the private sector, we are also increasing our data sharing partnerships with private sector healthcare organizations through health information exchanges.

With MHS GENESIS, clinicians and patients will benefit from the advanced tools and capabilities available from a modern EHR. Key features such as advanced analytics and an online patient portal increase efficiency, improve health outcomes, and enable patients to be more engaged in their healthcare decisions.

Thank you again for the opportunity to share the progress that we have made to transform the delivery of healthcare for servicemembers, veterans, and their families.

Successful deployment of MHS GENESIS at our first site is a first step in implementing what will be among the largest integrated inpatient and outpatient EHR in the United States. As a partner in our progress, we appreciate Congress' interest in this effort, and ask for your continued support as we deliver on our promise to provide world class care to those who faithfully serve our Nation. I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF MS. STACY A. CUMMINGS

Chairman Cochran, Ranking Member Durbin and distinguished Members of the Subcommittee, thank you for the opportunity to testify before you today. I am honored to represent the Department of Defense (DoD) as the Secretary's program executive responsible for modernizing the military's electronic health records (EHR) system and enhancing interoperability with the VA and private sector providers.

The mission of the Program Executive Office Defense Healthcare Management Systems (PEO DHMS) is to transform the delivery of healthcare and advance data sharing through a modernized electronic health record for service members, veterans and their families. To this end, DoD is committed to three equally important objectives: deploy a single, integrated inpatient and outpatient electronic health record, branded MHS GENESIS; improve data sharing with the VA and our private sector healthcare partners; and successfully transform the delivery of healthcare in

the Military Health System (MHS) through advanced tools that allow beneficiaries to have more control over their healthcare experience.

The DoD was an early pioneer in the development of a centralized, global electronic health record when it introduced the AHLTA in 2004. At the time, the DoD's in-house EHR solution was looked to by private sector enterprises as the future of EHRs. Over the last decade, significant advances have been made in the technologies offered by the private sector. In 2013 the DoD made the decision to transition from home-grown government-developed EHRs to a single, integrated commercial-off-the-shelf (COTS) capability. Two factors contributed to this decision. First, the needs within the MHS could be better met by state-of-the-market commercial applications. Second, the DoD could leverage private sector investments in technology and established data sharing networks with civilian partners to reduce costs and improve the customer experience. Staying current with the latest advancements in technology without being the only investment stream enables the DoD to benefit from some of the best products in health IT without carrying the financial burden alone.

As we work toward the goal of fully deploying a modern EHR across the MHS, I am excited to share that we hit an important milestone last month. On February 7, the DoD deployed MHS GENESIS at its first patient care facility at Fairchild Air Force Base (AFB) in Spokane, Washington. This was a massive effort that took the coordination, guidance and support of multiple DoD agencies and organizations. I'd also like to acknowledge the 92nd Air Refueling Wing, Air Force Medical Operations Agency (AFMOA) and Defense Health Agency (DHA) for their tremendous work to make the Go-Live at Fairchild AFB a success. With me today is the Commander of the 92nd Medical Group at Fairchild AFB, Colonel Margaret Carey. Colonel Carey's leadership has been instrumental in coordinating and implementing onsite deployment activities, including gathering site-specific information, training staff, overseeing change management, and providing post-deployment support. In our first month following deployment, we tracked user behavior and see progress in many areas, including patient portal utilization and improved clinician decisionmaking. MHS GENESIS isn't just a technology. It's a transformation of culture and process that is powered by strong leadership from inside the MHS. Colonel Carey embodies the proactive leadership qualities that will be required throughout DoD to ensure continued success of MHS GENESIS.

MODERNIZE THE ELECTRONIC HEALTH RECORD (EHR) SOFTWARE AND SYSTEMS
SUPPORTING DOD CLINICIANS

To streamline and improve healthcare delivery, MHS GENESIS integrates inpatient and outpatient best-of-suite solutions that connect medical and dental information across the continuum of care, from point of injury to the military treatment facility, providing a single patient health record. This includes garrison, operational, and en route care, increasing efficiencies for beneficiaries and healthcare professionals. Over time, MHS GENESIS will replace DoD legacy healthcare systems and will support the availability of electronic health records for more than 9.4 million DoD beneficiaries and approximately 205,000 MHS personnel globally.

The deployment and implementation of MHS GENESIS across the MHS is a team effort. Complex business transformation requires constant coordination and communication with stakeholders and partners, including the medical and technical community, to ensure functionality, usability and data security. DoD engaged stakeholders across the MHS to identify requirements and standard workflows. The result was a collaborative effort across the Services and the Defense Health Agency to ensure the clinical workflows enabled by MHS GENESIS are standard and consistent across the enterprise to minimize variation in the delivery of healthcare.

In July 2015, the DoD awarded a \$4.3 billion contract to the Leidos Partnership for Defense Health (LPDH) to deliver a modern, interoperable EHR. The LPDH team consists of four core partners, Leidos Inc., as the prime developer, and three primary partners in Cerner Corporation, Accenture, and Henry Schein Inc. MHS GENESIS provides a state of the market COTS solution consisting of Cerner Millennium, an industry-leading EHR, and Henry Schein's Dentrax Enterprise, a best of breed dental module.

Through a tailored acquisition approach, DoD leveraged commercial best practices and its own independent test community to field a modern, secure and connected system that provides the best result for the end user with a positive experience from day one. One example of leveraging commercial best practices was opting to utilize commercial data hosting, which allowed DoD to combine private sector speed and technology with the Department's superior data security knowledge and provide advanced analytics for our end users and beneficiaries. While there is still much work

to be done, the integration of the commercial data hosting into DoD networks and systems represents a new direction in Pentagon information technology (IT) culture and practice. This innovative approach has set the bar for COTS systems and commercial partnerships by the DoD and other Federal agencies in the future.

Additionally, we are employing industry standards to deploy and optimize the delivery of MHS GENESIS. Rollout across the MHS follows a “wave” model. Initial fielding sites in the Pacific Northwest are the first wave of Military Treatment Facilities (MTFs) to receive MHS GENESIS, which began on February 7, 2017 at Fairchild AFB. Fielding at the next three sites in Washington State—Naval Hospital Oak Harbor, Naval Hospital Bremerton and Madigan Army Medical Center—will begin at the end of fiscal year 2017. By deploying to four Initial Operating Capability (IOC) sites that span a cross section of size and complexity of MTFs, we are able to perform operational testing activities to ensure MHS GENESIS meets all requirements for effectiveness, suitability and data interoperability to support a full deployment decision in 2018. Deployment will occur by region—three in the continental U.S. and two overseas—in a total of 23 waves. Each wave will include an average of three hospitals and 15 physical locations, and last approximately 1 year. Regionally grouped waves will run concurrently. This approach allows DoD to take full advantage of lessons learned and experience gained from prior waves to maximize efficiencies in subsequent waves, increasing the potential to reduce the deployment schedule in areas where it makes sense to do so. Full Operational Capability (FOC), to include garrison medical and dental facilities worldwide, is scheduled for 2022.

To support our first deployment to Fairchild AFB in February 2017, the MHS GENESIS program established an aggressive schedule, with concurrent system configuration, contractor testing, government testing, and cybersecurity risk management. Together, the DoD Healthcare Management System Modernization (DHMSM) Program Management Office, DHA, the U.S. Air Force and our industry partner, the Leidos Partnership for Defense Health (LPDH), developed interfaces and user-approved workflows, and finalized the technical integration of the baseline operational system. Today, clinicians and dentists are documenting patient records in MHS GENESIS, and ancillary capabilities such as pharmacy, labs and radiology are working as expected. Feedback from providers at Fairchild has been positive, with many citing the ease of use and integration into their daily work practices.

While initial feedback was positive, we also captured lessons learned to improve provider experience at our remaining fielding sites in the Pacific Northwest. Training is one area noted where we can make a few adjustments. Feedback indicated the training modules built into our deployment schedule were more than adequate to teach the functionality of MHS GENESIS. Providers felt comfortable using and documenting patient care in MHS GENESIS. However, more specialized training with a deeper dive into provider specialty areas such as laboratory and radiology, to name a few, was requested. We are evaluating our existing training curriculum and assessing enhancements based on this feedback.

MHS GENESIS End User Feedback

"Provider notes are beautiful! In the legacy systems, notes were extremely hard to decipher for pertinent information. In MHS GENESIS, the workflow pages and dynamic documentation make it easier to document and review needed information. The notes are so much cleaner, and utilizing autotext/smart templates is great!" - Fairchild Provider

"By day two, many providers had already gotten fast enough, to where they were documenting in the patient room while seeing the patient – very uncommon with the legacy system." - Adoption Coach

"Being able to use Message Center for secure messaging between clinical staff and patients is so easy to use. Wish we had it years ago!" - Fairchild User

"Rad Techs/Radiologist LOVE the new RadNet solution within MHS GENESIS. They have been much faster, and there are less errors than legacy!" - Fairchild User

"Overall, the ease of use of MHS GENESIS is so far beyond what their legacy system was capable of, there are no complaints even when issues arise. - Fairchild User

Another area noted is that of patient registration. While we did pre-register select patients in MHS GENESIS prior to the Go-Live deployment at Fairchild AFB, registering patients for the first time at the clinic resulted in a longer processing time. We anticipated this and provided the necessary resources to ensure patients were registered in a timely fashion with minimal impact to the care facility. With the experience gained at the first deployment site, we are now evaluating patient registration to determine the right course of action at our remaining fielding sites in the Pacific Northwest. We also have the opportunity to communicate with and educate patients about the many benefits of MHS GENESIS, including the MHS GENESIS Patient Portal.

INTEROPERABILITY AND DATA SHARING

As the DoD transitions to MHS GENESIS, our commitment to expand our interoperability efforts with the VA and private sector providers remains unchanged. Service members and their families frequently move to new duty assignments, they deploy overseas, and eventually, transition out of the military. As a result, there are many different places where they may receive medical care. For instance, more than 60 percent of all active duty and beneficiary healthcare is provided outside a MTF through TRICARE network providers. Healthcare providers need up-to-date and comprehensive healthcare information to facilitate informed decisionmaking whenever and wherever it is needed—from a stateside MTF to an outpost in Afghanistan, from a private care clinic within the TRICARE network to a VA hospital, and everywhere in between.

The DoD and VA are two of the world's largest healthcare providers and today, they share more health data than any other two major health systems. In April 2016, DoD and VA certified to Congress that they are fully interoperable, in accordance with the fiscal year 2014 National Defense Authorization Act (NDAA). While the Departments met the required objectives, interoperability is a spectrum wherein data sharing and functionality can continually improve. As a result, we continue to expand interoperability beyond last April's DoD/VA Joint Certification of Interoperability. MHS GENESIS' s modern capabilities will allow DoD to share more complete data with similarly equipped Federal and private sector partners while simultaneously increasing the number of DoD data sharing partners by the thousands.

The two Departments currently share health records through the Defense Medical Information Exchange (DMIX) program, which includes the Joint Legacy Viewer (JLV), a health information portal that provides access to medical information across multiple government and commercial data sources. In addition to enabling enhanced data sharing between DoD and VA, JLV allows DoD to leverage our expanding relationships with private-sector providers to give clinicians a comprehensive, single view of a patient's health history in real-time as they receive care in both military and commercial systems. JLV is currently available to DoD providers in AHLTA and is being incorporated into MHS GENESIS.

Over the past 4 years, DoD steadily increased its data-sharing partnerships with private sector healthcare organizations. Since many service members and their beneficiaries receive specialized care outside of the MHS, seamless access to healthcare records from civilian providers supports clinical decisionmaking by delivering a comprehensive picture of patient health. Expanding these partnerships will enable medical providers to move away from a reliance on fax machines for patient record sharing and into a modern era with increased, current health data that's available anytime, anywhere on a computer screen. To date, DoD has partnered with members of the eHealth Exchange via the Sequoia Project, a network of exchange partners who securely share clinical information across the United States. There are over 20 exchange partners already connected with the DoD and another 10 in the process of connecting. In the future, DoD plans to expand its data-sharing partnerships via CommonWell—an independent, not-for-profit trade association with connections to more than 5,000 private sector healthcare sites. Leveraging this connection through MHS GENESIS will expand on the great work DoD has already accomplished through health information exchanges.

Another phase of interoperability is connecting the benefits and capabilities of MHS GENESIS to operational forces in a deployed theater environment that includes more than 450 forward and resuscitative sites, 300 ships, six theater hospitals, and three aeromedical staging facilities. While each service currently uses the Theater Medical Information Program-Joint (TMIP-J), MHS GENESIS will be fully leveraged as the core application for accessing, capturing, and documenting medical and dental care through the Joint Operational Medical Information System (JOMIS) to provide continuum of care support in various treatment phases including combat casualty care, medical evacuation, and in-theater hospitals. The DoD is

also employing modern tools for operational first responders to document patient status and treatments rendered at point of injury. The Mobile Computing Capability (MCC), released last year, is a medical application that operates on DoD-approved phones and tablets in no or low communication environments and allows first responders to document and transfer patient treatment information, access reference material as well as view diagnostic and treatment decision support tools.

We fully recognize that health IT will keep evolving and that we must constantly improve our capabilities. The complexity of our interoperability mission takes time and steadfast commitment. To that end, DoD actively participates in forums with government and industry partners, including the U.S. Department of Health and Human Services, VA and commercial interoperability organizations, to outline and advance our common goals toward nationwide interoperability. It is DoD's hope and vision that driving a national approach with public and private community partners creates a viable economic model that allows us to make investments in industry and leverage their advances for long-term cost savings, with an end state of fully comprehensive and sharable data incorporated into modern EHRs throughout the industry. Through strong communication, collaboration, and technical leadership, we will continue to ensure that current and future health information is seamlessly shared across public and private healthcare networks.

TRANSFORMING THE DELIVERY OF HEALTHCARE

A modern EHR incorporates advanced tools and capability improvements that promote efficiencies, provide a higher quality of care, and improve population health outcomes. The suite of tools available through MHS GENESIS include robust data reporting and tracking capabilities, improved analytics, drug-to-drug interaction alerts, and a user-friendly patient portal. Taken together, these tools enable healthcare professionals to more easily monitor and respond to a patient's health status and facilitate good decisionmaking.

Patients in the MHS, not unlike their civilian counterparts, want more medical information transparency and to be actively engaged in their healthcare experience. The MHS GENESIS patient portal, which will replace RelayHealth and TRICARE Online (TOL), is a secure one-stop website where patients can access their current medical and dental health records, manage appointments, and request prescription refills. It also allows patients to view doctor's notes from their appointment and ask questions through secure messaging while their visit is still fresh in their mind. Within the first month of operation at Fairchild AFB, more than 1,100 beneficiaries have signed up for the new patient portal.

During the transition period, the MHS GENESIS patient portal and TRICARE Online (TOL) Patient Portal will co-exist, albeit with different functions. When service members move to a military hospital or clinic that has not started using MHS GENESIS, they will simply resume using RelayHealth and TOL.

Ease of use for the provider is another key benefit of MHS GENESIS, which puts more integrated information at the healthcare professional's fingertips for rapid decisionmaking, reducing duplication of data collection and procedures, such as ordering unnecessary labs or duplicate prescriptions. At Fairchild AFB, we have already seen evidence that the increased patient data, health alerts and tools to cross reference medical guidance has led MHS GENESIS clinicians to make changes to their behavior. More information in the patient's record has yielded better guidance for providers to make more informed patient decisions. MHS GENESIS's life cycle management and component modernization approach will minimize obsolescence, and promote adoption of emerging Health Industry Standards and new technologies, including compliance with the Office of the National Coordinator (ONC) meaningful use regulations.

CONCLUSION

Thank you again for the opportunity to come here today and share the progress that we've made to transform the delivery of healthcare for service members, veterans, and their families. The successful rollout of MHS GENESIS is an important first step in implementing what will be the largest integrated inpatient and outpatient EHR in the United States. Because DoD purchased lifetime upgrades with MHS GENESIS, our healthcare providers will always have the latest advancements in technology in a timely manner. DoD beneficiaries will have greater access to their information, allowing them to be more engaged in their own health-related activities. While we are well on our way, the road ahead is long, with many challenges that we will have to anticipate and respond to. As a partner in our progress, we appreciate the Congress' interest in this effort and ask for your continued support to help us deliver on our promise to provide world-class care and services to those

who faithfully serve our Nation. Again, thank you for this opportunity, and I look forward to your questions.

Senator COCHRAN. Thank you very much for your statement. I will now recognize the distinguished minority member of the committee, Senator Durbin.

TOBACCO

Senator DURBIN. Thanks, Mr. Chairman. As I said in my opening statement, I want to ask you about the use of tobacco in the military. Among the Surgeon Generals, is there anyone who disagrees with the premise that tobacco use by our military is a significant challenge to their health and readiness? Do you all agree?

[Nodding in agreement.]

Senator DURBIN. So, the next question is what are we doing about it? It turns out that 38 percent of the smokers in the military started after they enlisted. Clearly, the environment that they were brought into was one that gave them an opportunity, perhaps encouragement, to smoke.

When they go through basic training, correct me if I am wrong, in each of your branches, it is a non-smoking environment. Is that correct? I understand that until the year 2004, the next level of training, the advanced training, was also a non-smoking environment. Is that correct? I think it is.

Can you tell me why that was changed? Why we went from prohibiting smoking during basic training and then allowing it as of 2004 in advanced training? Does anyone know the reason? The panel is quiet. Can you give me an explanation as to why it was changed? Does anyone know why it was changed?

General EDIGER. Senator, in Air Force technical training, it is still an environment that actively discourages smoking. The instructors are not permitted to use tobacco within the presence of the trainees. In accordance with the DOD policy, tobacco use on the installation is restricted to designated tobacco use areas.

I know the Second Air Force Commander who oversees technical training in the Air Force has a very active program to discourage tobacco use among trainees.

General WEST. Yes, Senator. We are trying to get after that as well. In talking with our Training and Doctrine Command that governs all that training, the AIT programs vary in length, some of them are 4 weeks long, some of them over 40 weeks. So, the consistency of having no smoking throughout the entire AIT training varies depending on the length of the course.

I do not have the details of which courses, but there is some limitation based upon the length of the course, and those that are upwards of a year almost, it is kind of a different environment for some of those.

But I concur, Senator. As I said before, there is no minimum daily requirement for tobacco products. Anything we can do is from the medical standpoint to encourage our members to not smoke with education, with smoking cessation classes, with smoking cessation support, with medication for those who choose to stop smoking, we highly encourage that and try to push that.

Admiral FAISON. Senator, in the Navy, like the Air Force, we do all of our training, many of our C schools included, down in San

Antonio, which is a smoke free campus. We actively discourage that amongst our students, and it is prohibited amongst the faculty down there.

In addition, we have put in place those that come on active duty who were smokers beforehand that then have recidivism and go back to smoking—we have support services in place at the school, and then at every Navy Medicine Command around the world to support them in their kicking the habit long term.

So, we have actively pushed to minimize smoking in those environments, to include our C schools and follow on assignments. Thank you, sir.

Senator DURBIN. The Air Force Surgeon General who preceded you, Travis, in 2015, issued a report that the cost of tobacco to the military is \$4.5 billion or more each year in preventable healthcare costs, not to mention the fact that many of these airmen, soldiers, sailors, and marines end up compromising their own personal health in missing their assignments because of their dependence on tobacco.

The rest of the world seems to have awakened to this. Why is the military so slow in responding to what has been a phenomenon or trend across America for decades?

General EDIGER. Senator, we completely agree that tobacco is a serious detriment to the health and performance of our servicemembers, and we are tracking this very carefully. In the Air Force, since 2008, we have seen a 50 percent reduction in smoking among U.S. Air Force airmen.

The area where are focusing a lot of our attention now in addition to that is on the use of smokeless tobacco, which remains at about a five to 6 percent rate among airmen, and that rate has not decreased.

NICOTINE ADDICTION

Senator DURBIN. Do you quarrel with the premise that nicotine is addictive?

General EDIGER. I do not.

Senator DURBIN. Most people do not. Switching from tobacco to these e-cigarettes and creating a new chemical dependency or a different chemical dependency cannot be an element of readiness as far as I see.

General EDIGER. We agree. We have started gathering data on the frequency with which airmen are using vaping, electronic cigarettes. So, we now have data that shows about four to 5 percent of airmen are using electronic cigarettes in some fashion.

ELIMINATE TOBACCO DISCOUNT

Senator DURBIN. Mr. Chairman, this committee, with appropriations language, could eliminate the discount that was being given to the purchase of tobacco in the military, an incentive for more people to use tobacco.

I am going to follow through on this. I think this is an issue which we can all agree on, and we just need to show some leadership. Thank you.

Senator COCHRAN. Thank you, Senator. The time of the Senator has expired. I now recognize the distinguished Senator Roy Blunt.

FORT LEONARD WOOD HOSPITAL

Senator BLUNT. Thank you, Chairman. I have about three questions I want to cover here, and not a lot of time. First, I will just ask a question, General West, that I ask every year, about the Fort Leonard Wood Hospital.

I know you have been to the Fort recently. I have been to the Fort recently. The hospital underwent major renovation about 40 years ago, and trying to keep up with minor renovations for right now. It has been ranked number one, I believe, on the MILCON medical priorities list. Is that still the case?

General WEST. Yes, sir, it is still number one on our priority list.

Senator BLUNT. Is there any planning money available yet for that account?

General WEST. Not right now, Senator. Again, it is our number one priority. We do the planning, construction, and outfitting once we get that construction project started to take approximately 5 years to go through, but we definitely have it as our number one priority and are continuing to work with the Defense Health Agency that has the MILCON prioritization to make sure that is continued—

Senator BLUNT. Would it help with that number one priority if we looked at a way to phase it in, or are you already looking at a phased approach?

General WEST. So, we are looking at a phased approach, and that might help get the start of that if we can get the phasing started. That is one approach, Senator that would be helpful in getting that moving.

Senator BLUNT. I wonder what the record is for being the number one priority and never get to it. If we have not set it already, I hope we are not intent on setting that record, because it has been at the top of this list for a long time. They are trying to do the things they need to do, but the size of the operating rooms are no longer adequate for the kind of equipment that you put in operating rooms now, and there are just lots of questions.

We are going to continue to be interested in that, and I know you are, too, and I am grateful.

TELE-MEDICINE

One of the things that I am seeing there and in other hospitals and clinics is more tele-medicine. I want to ask about tele-medicine generally. On a specific topic, I think in all the branches of the Service now, there is a behavioral health exit interview. Would that be accurate everywhere?

I think there is usually a choice there, it is just a little survey. When people exiting the military have a choice of seeing a person or going to tele-health, is the tele-health a big negative? What do you see on behavior health with tele-health? General Ediger?

General EDIGER. Yes, sir. So, we do a separation health physical now on airmen who are either retiring or separating from the Air Force. That does include an assessment for behavioral health problems. That is a face-to-face.

Senator BLUNT. It is always face-to-face?

General EDIGER. Yes, sir.

Senator BLUNT. How about in the Navy, is it always face-to-face, or do you have an option of talking to a tele-health person?

Admiral FAISON. No, sir, it is always face-to-face, and it is part of our annual health assessment, and it is part of the exit interview that is also face-to-face. If issues are uncovered, then we have handoff coaches to help them get plugged in with the VA.

Senator BLUNT. How about in the Army, General West?

General WEST. Sir, we have both face-to-face and virtual, and we have seen in those that have the offering of virtual, that it is very well accepted. Our younger soldiers who are used to virtual interface, social media, actually do like the option of having the virtual behavioral health.

DEPARTMENT OF DEFENSE AND NIH

Senator BLUNT. It is something to think about as another option, but tele-health generally is a big issue. My third question, we also have NIH (National Institutes of Health) funding in this broader committee, could you talk in general—Ms. Cummings, you may be the best person to do this—about the collaborations between the Department of Defense and NIH?

One of the things we are constantly having to explain is that we believe in this area on this subcommittee, that there is not a duplication of effort that is a problem, but if there is any communication, it is positive.

What I am asking is do you know of any concerns about duplication of effort in health research and health issues funded here, and health research funded through NIH?

Ms. CUMMINGS. I am personally unaware of any duplication of effort, but to be clear, my area of expertise is acquisitions, and that may be a better question for one of the Surgeon Generals.

Senator BLUNT. Let's just go right down the list. General Ediger, any thoughts on that criticism of some of the research we fund out of this committee, that, well, that would be better all focused on NIH instead of a health research focus through your offices?

General EDIGER. I know in Military Health System in general we have a strong linkage and collaboration with the NIH. There are a number of NIH related protocols in terms of clinically based research that we are a part of within our hospitals.

Senator BLUNT. If you were not part of that, would NIH be doing the specific work you need done in some of these areas?

General EDIGER. I believe the research we do actually builds and adds upon that done at the NIH. I think within the community of research there is a strong sharing of information, so I see it as building synergism.

Senator BLUNT. If anybody wants to add anything differently than that in writing later, but I am out of time, and thank you, Chairman.

Senator COCHRAN. Thank you, Senator. The chair now recognizes the distinguished Senator from Hawaii, Mr. Schatz.

MENTAL HEALTH SERVICES STIGMA

Senator SCHATZ. Thank you, Mr. Chairman. Thank you, Surgeon Generals, for your important work. I want to talk to you about mental health stigmatization. In 2006, GAO (Government Account-

ability Office) found that DOD is working to improve the stigma associated with servicemembers who want to access mental health services.

But the same GAO study cited a 2014 and report that identified 203 different DOD policies and regulations that may conflict with the Defense Department's goal to eliminate stigma, and let me give you just a couple of examples stipulating that of the 203, maybe some of them have been—you are in the process of clearing the underbrush.

The Army's regulation that governs a soldier's assignment to recruiting duty requires that he or she provide a mental evaluation statement proving no record of emotional or mental instability without defining "instability."

AFRICOM and CENTCOM have policies that deny deployment or require waivers for individuals who have received "a behavioral healthcare diagnosis or relevant prescription/medication."

I understand we have a policy, and I imagine you are all on board with that, but I would like to talk to you, get your thoughts on the extent to which some of these individual Service branch policies, regs, and even sort of legacy processes and procedures, and cultural aspects tend to run against official OSD (Office of the Secretary of Defense) policy, official national defense authorization policy, and what we are going to do to clear that underbrush so that where the rubber hits the road, your servicemembers can access the care they need without jeopardizing their career. I will start with General West.

General WEST. Senator, thank you for that question. The first part of it, reducing stigma, I think overall we have done a good job of that by increasing behavioral health assets at the unit level. So, when you have embedded behavioral health, it makes servicemembers/soldiers more likely to want to see their behavioral health provider without having to go to a facility, so they are right there in their units.

A lot of the policy, I think, can be deconflicted if you have that behavioral health provider within the unit, because some of those policies, for example, the various combatant command policies, are for readiness issues, and they want to make sure that individuals in the environments that they are operating in are not put at risk or a disadvantage if they have certain medications they need.

Senator SCHATZ. Sure, and there is attention there, right?

General WEST. Yes.

Senator SCHATZ. You do have to make a determination about the readiness of any soldier, sailor, or airman, but the problem here, I think, is that there is a tension—there are still old rules. It is not as though these rules have been updated or these evaluations have been updated to account for the fact that there is a new national policy on destigmatization.

You are right to articulate there is a tension, you are right to say deploying behavioral health assets sort of as far and as deep as possible throughout all Service branches makes sense. You are still stuck with rules that are old, that are 20 years old, that are 30 years old, that do not account for, I think, a more enlightened view of this matter.

Would you agree with that?

General WEST. Sir, I do not know all the rules and regulations. I will definitely take a look and make sure there are none that we have that we can work on changing, but I think what I have seen, and I think the good news is that more of our servicemembers, and not only our servicemembers but our family members, dependents and children, are getting more care, the care that they need because we are putting those assets far forward and putting them in schools for our children, in unit areas, with our brigade combat teams.

So, the feedback we have received is they like those assets in their units, they are more likely to see them, and we have actually caught things much earlier. Our hospitalization rate for significant behavioral health conditions has decreased by 40 percent. The number of individuals that have to actually get to a point where they are hospitalized did greatly decrease in our civilian population as well, our children.

Senator SCHATZ. Let me sort of revise the question for the rest of the panel in my remaining 30 to 40 seconds. Do we have your collective commitment to look at these remaining regulations and any cultural issues and work across all Service branches to clear the sort of final batch of underbrush? I think that you are making progress, but we still have a way to go.

Admiral FAISON. Absolutely.

General EDIGER. Yes, sir.

Senator SCHATZ. Thank you.

Senator COCHRAN. Thank you. The distinguished Senator from Kansas, Mr. Moran.

MILITARY HOSPITALS FOR VA SERVICES

Senator MORAN. Mr. Chairman, thank you very much, I appreciate the service represented by the folks at the table in front of me. Let me begin with you, General West. Thank you very much for your help in the past with Irwin Army Hospital at Fort Riley in the efforts of getting that hospital completed.

The question that it raises is the last time I was there, which is now just a few months ago, the conversation turned to including more veterans into patients at that hospital. Fort Riley is a military retiree as well as a veteran community.

My question is are there talks ongoing, either in that instance, or with the VA generally about utilizing military hospitals for VA services?

General WEST. Yes, sir. Thank you for that question. I think it is extremely important. Military Health System-wide, we are looking at opportunities to have all of our patient category types seen in our facilities, because that helps us with readiness. Our veterans that have complex medical conditions help our surgeons, help all of our trainees to get the proper patient mix that they need.

We have been in dialogue with our—I know because of the VISN (Veterans Integrated Service Network) structure, locally, we talk with our VA partners on certain areas where we can collaborate. If we have a capability in our MTS to bring our patients in, then we will definitely look at bringing that population in, if our policies allow us to do that. That is definitely something we want to do.

HEALTH SHARING

Senator MORAN. I appreciate your words. I am very interested in this, as chair of the Appropriations Subcommittee on Veterans, this is an issue I want to push.

You point out its value for military readiness, which I fully acknowledge. I also would add the access to healthcare for veterans who live long distances from a VA facility, which is certainly the case in a State like ours. I want to take this commentary to a different plane and ask you this question because one of the things that is apparently going on is that DHA (Defense Health Agency) is assuming more and more authority over the Services and your ability to manage as Surgeon Generals the healthcare affairs of your military component.

You can dissuade me if I do not have that understanding correctly, but that seems to me to be the direction you are going in. I think this is an example of where having the Commander at Irwin Army Hospital, the Hospital Commander, talking to the VA VISN Director in Kansas City, that is a better solution and more likely to find common ground than if there is a different level of authority making decisions like this.

I would appreciate any commentary, General Ediger, or others would have.

General EDIGER. Yes, Senator. I agree completely that we really value providing care to veterans from our hospitals and clinics. It is good for the veterans, as you state, to provide access to care. It is good for the readiness of our deployable teams.

Throughout DOD, all three Services, we have many sharing agreements. We have over 60 of them in the Air Force. I agree that those agreements are best managed locally and maintained to a common standard, because the opportunities vary by location in terms of the scope of services that are available.

DHA RUN SYSTEM

Senator MORAN. Let me ask this broader question. Would a DHA run system help or hinder the ability to make decisions quickly and efficiently to provide the best care for your military men and women?

General EDIGER. As you know, Senator, we are working right now to build a Department of Defense plan for implementing the fiscal year 2017 NDAA that gave the management of the Health Care Administration authority to the Defense Health Agency.

I believe we can set that up in a way that we can continue to effectively manage the sharing agreements with the VA, and that is one of our priorities in terms of developing an optimal implementation plan, to set that up in a way where the health of those agreements is sustained.

Senator MORAN. I appreciate your comments about the ability to make it work. I would at least state for myself that I want to be certain it does not go too far in reducing the authority. Any comments in that regard?

Admiral FAISON. Sir, for the Navy, combat survival in the future conflict is going to depend on how well trained and prepared our

medical forces are, and how quickly we can get them and get them out the door quickly.

The MTF is the epicenter of that effort. There is no back-up plan for that. As General Ediger said, we have to make that successful, agile, rapidly responsive, in a world that again increasingly calls upon us to get out the door, so we are working very hard to make sure that happens in a smart way, and at the same time, realize the benefits that can come potentially with that NDAA.

I think all three of us are heavily engaged in that, to make sure that is a success. But it is readiness, making sure people are prepared to save lives tonight, and get out the door quickly if necessary. Thank you, sir.

Senator MORAN. Thank you.

Senator COCHRAN. The time of the Senator has expired. The distinguished Senator from Montana, Mr. Tester, is recognized.

ELECTRONIC MEDICAL RECORDS

Senator TESTER. Thanks, Mr. Chairman. I want to thank all of you for your service, and I want to tell you it is nothing short of amazing the work that the Medical Corps are doing in the field of battle, saving lives, getting people to locations where they can get the treatment they need.

I want to talk to you, Ms. Cummings, a little bit about electronic medical records. I serve as ranking member on the VA Committee, and I will tell you, as I am about to hold you accountable, we are going to be holding the VA very accountable on this issue, so it is not just you guys, so you know.

You talked about interoperability on a very basic level over the electronic medical records. It is a read-only interoperability. It is not an interoperability that allows for computations or test results, edits or notes. So, it is not true interoperability. It is not where we need to be, let's just put it that way.

We have spent over \$1 billion on interoperability between the DOD and the VA. We have had committee meetings after committee meetings over the last 10 years on this, both the VA and this committee, this subcommittee, the Appropriations Committee as a whole. We still are not where we need to be.

Could you comment a little bit—I will tell you that I hold both the DOD and the VA accountable. Could you tell me, you talked about a new MHS GENESIS system that is going to be good, how often do you talk to VA? The VA is about to put in a new system. Are these two systems going to be unequivocally compatible, that we will be able to do the things that are truly interoperable that electronic medical records will be able to do?

Ms. CUMMINGS. I will start out by saying I agree with you, where we are within interoperability is a first step, not a last step. We are working towards that level of interoperability that you and the committee are holding us accountable to get to.

We are working with industry because we think the best way to get to true semantic interoperability is nationwide interoperability, and interoperability with the VA, but also with our private sector partners.

Senator TESTER. But you are not even there between the DOD and the VA.

Ms. CUMMINGS. Correct.

Senator TESTER. Keep going.

Ms. CUMMINGS. I, personally, speak to the VA on a regular basis. Last week, I gave a presentation at the Joint Executive Committee in front of senior leaders at both the Department of Defense and VA, and they reiterated their commitment to interoperability. I reiterated my commitment to providing technical assistance and information to the VA as they are making their decisions.

The Secretary has announced July 1 for when they are going to publicly announce what their plan is to move forward with a new EHR solution/strategy.

Senator TESTER. Are you going to know when they make that announcement on July 1 whether you are going to be able to communicate between the two systems?

Ms. CUMMINGS. We will absolutely be able to have the same level of interoperability and build towards enhanced interoperability as we have been discussing in this conversation, because we are going to work together to make sure—

Senator TESTER. Let's just back up a little bit. So, when they make the announcement in July, and they buy this new system, you are fully confident that you will at least be where you are now and have the capability to get full interoperability within how many months?

Ms. CUMMINGS. I cannot commit to a number of months. I do not know what solution they are going to select, and whatever the solution is they select will impact how long it takes.

Senator TESTER. Here is the deal. We have been at this for a long, long time. One billion would buy multiple counties in the State of Montana. It is a lot of money. I have heard the same response now for 4 or 5 years, that no, we are not going to make the commitment as to when we are going to get this done, just trust me, it is going to happen.

The problem is that the folks that are in the military and the veterans when they get home are the ones that are suffering because of this. We are spending more money than we need to be spending on healthcare because of this.

You are right, it needs to also work with the private sector, too. We are not even to a point where we have true interoperability between the two government agencies that are both funded by this committee and other committees. Well, actually, this committee, the Appropriations Committee. So, is there any urgency that is being felt here?

Ms. CUMMINGS. There is absolutely a sense of urgency, and I do want to reiterate that the type of interoperability—I know it is not where we want to be—it is based on what the physicians have told us the most important information for them to be able to see at the time they are providing healthcare.

We want to take it to the step where as you are going through your workflow in your electronic health record, the information comes into the record, and you can use it, just like data that was collected locally.

We are doing some actual investigation into that with a tool called Commonwealth that is part of our solution that we bought with MHS GENESIS. We will be demonstrating that later this

year, and as we have successes with our commercial partners, we will be able to leverage those successes to work with the VA to get that type of interoperability in the future.

Senator TESTER. There are at least three members on this subcommittee that are also on the VA Committee. I guarantee you we are going to hold the Veterans Affairs Administration accountable.

I need you guys to be much more aggressive on your end, too. I know you have bigger jobs to do than electronic medical records, but the fact is this is really important, and we have wasted way too much money on this.

Thank you, Mr. Chairman.

Senator COCHRAN. The time of the Senator has expired. The distinguished Senator from Alabama, Mr. Shelby.

COORDINATION DOD AND NIH

Senator SHELBY. Thank you, Mr. Chairman. I want to follow up on some of Senator Blunt's areas, because he is the Chairman of the Subcommittee on NIH. I think the complementary and coordination of biomedical research with the Department of Defense, the VA, and NIH is very important. I think a lot of things have come out of that. We all have benefitted from it.

We all know that a healthy soldier is a better soldier in many ways. It looks to me like there could be more coordination, some kind of task force, to decide something, who is doing what, are they complementary, is there coordination, rather than competing and going down parallel roads. Sometimes on parallel roads, somebody finds something, somebody does not. We all benefit from it.

Admiral, what is your take on all that, and can we do better because this is a committee that funds things, and we are interested in biomedical research in all phases, civilian and military, and that coordination, because we all benefit from it.

Admiral FAISON. Yes, sir, absolutely. Our research portfolio is primarily singularly focused on threats to military readiness and military health. There is overlap opportunity with the research portfolio at NIH.

We work hard on that. There is great opportunity to expand that. Some of the things that we do—I have liaison officers at the CDC (Centers for Disease Control and Prevention), at NIH, and in a variety of different health agencies in the Federal Government.

We have partnerships with the NIH right now for Zika research, as well as disease surveillance and monitoring in South America, as well as some of the groundbreaking research we are doing in Western Africa to set the stage for an Ebola and Zika vaccine in the future.

We are very heavily partnered with—

Senator SHELBY. Are you doing a lot of coordination, I have heard you were, with our European allies?

Admiral FAISON. Yes, sir, absolutely.

Senator SHELBY. We are all looking for something to help us.

Admiral FAISON. Absolutely. We have strong partnerships with our allies, not only in Europe, but also in Asia, where we get together on a regular basis to discuss these and identify opportunities.

BIOLOGICAL THREATS

Senator SHELBY. Admiral, in your area, let's get into biological threats. Could you describe for the committee here this morning how prepared we are as a nation to promptly respond to biological threats in the future, and whether there are additional steps that we need to take to help fund this threat, which a lot of us believe is real?

Admiral FAISON. Yes, sir. I am not sure I can speak about as a nation, but I can speak about our Navy.

Senator SHELBY. I know.

Admiral FAISON. I think it falls into three—

Senator SHELBY. You are an integral part.

Admiral FAISON. Yes, sir; absolutely. We have a robust research agenda that focuses on potential biological threats, both from pure competitors as well as asymmetric threats, and we do that in partnership amongst the three Services.

I think those are robust. I think those are making progress. I think we are well positioned in the area of research. Then there are physical defenses. The Navy practices and invests in these on a regular basis, so that all of our platforms are ready should they be attacked or should they come under threat.

Then there is surveillance and intelligence gathering where we look at future threats, again, to help inform those two previous areas of focus.

I think we are making progress in those three areas.

THREATS RESEARCH

Senator SHELBY. Do you feel comfortable we are prepared as of today? There are so many threats out there that we do not know.

Admiral FAISON. Yes, sir. There are many threats that we do not know. I do not know that I am ever comfortable in a very uncertain world. I think continued surveillance, continued attention to the things that are going on in the world are going to be critical to maintain our posture so we can adequately protect our folks and ensure we can meet the needs of our Nation.

Senator SHELBY. General West, do you want to add to that?

General WEST. Yes, Senator. Thank you so much for the question. At our United States Army Medical Research and Materiel Command at Fort Dietrick, about 80 percent of the research is done there, biosurveillance is extremely important.

In fact, the reason we have a Zika virus—

Senator SHELBY. This is a potential real threat to our troops and everything, is it not?

General WEST. Absolutely, it is a threat, and that is why we have researchers trying to determine what are those areas that our troops might be operating in, all of our servicemembers, so trying to look at countermeasures, look at forward thinking in trying to determine if there are any vaccine developments to prevent their exposure or to mitigate any exposure.

Again, the Zika virus vaccine is as far along as it is because of the decades of research that the teams were doing on the Flaviviruses and all the different other types of viruses, malaria is the number one threat to where all our servicemembers are, and

having sufficient treatment countermeasures and preventive measures for those is critical.

We are also looking at all other types of research to provide even immune, boosting the immune system to kind of be an overall mechanism of countering any type of exposure we might have to biologics.

There is much research going on, and it is coordinated. We do coordinate with NIH, we coordinate with civilian research academia, all those, to make sure we are not unnecessarily duplicating effort, and also our international partners.

Senator SHELBY. No substitute for a healthy soldier, is it?

General WEST. No substitute at all.

Senator SHELBY. Thank you, Mr. Chairman.

Senator COCHRAN. The time of the Senator has expired. The distinguished Senator from the State of Washington, Ms. Murray.

IVF

Senator MURRAY. Thank you very much, Mr. Chairman. Thank you all for your service.

I was incredibly proud last year when we passed the MILCON VA appropriations bill that included a provision to provide IVF coverage to our veterans whose service to this country made having families on their own impossible because of their injuries.

It brought VA's coverage in line with the Department of Defense, and with that provision in mind, I cannot begin to describe the frustration I felt when I learned that DOD proposes now to eliminate funding for the fertility pilot program in the amended budget submission.

Thirty-eight million dollars that was originally included in the fiscal year 2017 budget request was singled out in the amended budget submission. The Administration is asking for \$30 billion in extra funding, but somehow cannot find a fraction of that money to get this pilot program off the ground, and this comes across as a very deliberate attack on a procedure for servicemembers who have been seriously hurt while fighting for our country.

I wanted to ask each of our Surgeon Generals today, were you consulted on this change in the amended budget submission? Lieutenant General West?

General WEST. No, Senator, I was not, and our team was not.

Admiral FAISON. Senator, we were involved in the pilot development and proposal, but not in the decisions to not go forward.

Senator MURRAY. So, you were not.

General EDIGER. Senator, we were not.

Senator MURRAY. And you were not. I just believe these men and women really deserve the best medical care we can give them, and it is unacceptable to me to withhold that because of political interests from this Administration, so I expect the Department to follow through on this program, and I just want to make it clear to everyone, I will fight any attempt to cut this funding, especially when the Department is asking for \$30 billion. I just want that on the record and clear to everyone.

Lieutenant General West, I want to commend you and Army Medicine on a pilot program at Madigan Army Medical Center called JBLM CARES, the Joint Base Lewis-McChord Center for

Autism Resources, Education, and Services. This is a pilot program. It is organized by Madigan Commanding Officer, Colonel Michael Place, and they converted an unused child development center into a centralized facility to make sure military children with autism have access to applied behavioral analysis therapy and other critical treatments.

We should be looking to this innovative and resourceful pilot program as a model for the Military Health System to build and expand on. ABA therapy is critical to the development of children with developmental disabilities, but I do continue to hear from parents of children with other developmental disabilities like Down Syndrome, that they are locked out of ABA services under TRICARE.

As JBLM CARES continues expanding its operations, how will you work to provide similar care to children with other developmental disabilities beyond autism at bases across the country or even overseas?

General WEST. Thank you, Senator, appreciate the comments on that. The program at Madigan is an example of how we are looking at the best way to support our population with all types of disabilities or concerns. The fact that we have that there, there will be 150 patients that are going to be receiving therapy there, which is really amazing and remarkable.

That was based upon seeing a need and filling the need the best way that we could, so that is the way we are going to approach when a need is brought to our attention, if we can fill that.

With overseas, as far as our Exceptional Family Member Program and our EDIS or Education Program as well, making sure the first thing is that we do not put our families in a position where we are putting them in an area that does not have that resource if we cannot provide it ourselves, and then working and partnering with our civilian community where we can, where it is available, and if not, similar to what we did with the CARES Program, try to develop those, and working with the Defense Health Agency on the TRICARE Network to determine if we can get that more robust to support our population that needs that.

We are committed to identifying those special needs and making sure we can meet that either internally or working with our partners.

Senator MURRAY. Okay. I will be following that very closely.

General WEST. Yes, ma'am. Thank you.

Senator MURRAY. I want to thank all of our Surgeon Generals and Ms. Cummings for the work to roll out MHS GENESIS in military treatment facilities across my home State of Washington. I want to thank Colonel Meg Carey, who is here, Commander of the 92nd Medical Group at Fairchild Air Force Base, for traveling out here to be with us today, and for all of her work really on the MHS GENESIS that is operating at Fairchild.

Ms. Cummings, Lieutenant West and Vice Admiral Faison both mentioned in their testimony the importance of the behavioral health data portal. That is software that helps our mental health providers evaluate and track patients, and provide consistent coordinated care, and helps providers get a more comprehensive and detailed picture of patients with mental health needs.

This is a tool that is developed by the Services that helps military providers deliver better care to their patients, and it is incredibly important. This program has not been integrated into MHS GENESIS yet. When will that be done?

Ms. CUMMINGS. We are looking at how we can leverage the patient portal, which is inherent in the MHS GENESIS solution that we procured, and how we can leverage the patient portal to be able to share information from the patient directly to the provider.

We get our priorities from across the Services and the DHA to make sure that we are meeting the highest priorities, so I am going to have to get back to you on the record on exactly when we are going to be able to incorporate that, but I know we are looking into how we can leverage that portal so that it is a single experience for our patients.

Senator MURRAY. Okay. Can you give me the time line whenever you can?

Ms. CUMMINGS. I will.
[Information follows:]

Currently, patients visiting a behavioral health provider check in for their appointment and fill out Behavioral Health (BH)-specific questionnaires through the Behavioral Health Data Portal (BHDP) at private kiosks in their clinical care location, including Behavioral Health Outpatient, Intensive Outpatient, Inpatient, Child and Family Outpatient, Family Advocacy, and in Primary Care settings (Primary Care Managers and behavioral health providers embedded in Primary Care). The BHDP is a separate application from AHLTA and provides a single source for data capture and management, allowing data visualization during patient encounters and population-based data analysis beyond the encounter. As you know, DoD is in the process of deploying MHS GENESIS to four Initial Operating Capability (IOC) patient care sites in the Pacific Northwest. This limited rollout to a small number of sites allows DoD to assess the user experience and ensure that the capabilities of the new system are functioning as intended prior to deploying further across the Military Health System. As a part of this process, PEO DHMS is engaging with the functional community to gather feedback on the Patient Portal, including identifying areas where it's possible to expand the scope of the Patient Portal. Although no requirement currently exists to integrate BHDP into MHS GENESIS, PEO DHMS has been approached by the functional community regarding the feasibility of adding this capability. Given the sensitive nature of BHDP data, the transition of data to MHS GENESIS will require close coordination. Once the functional community establishes a requirement to integrate behavioral health information, PEO DHMS will work closely with the end users to prioritize adding this capability. A schedule would be developed following prioritization.

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

Senator SHELBY [presiding]. Senator Daines.

Senator DAINES. Senator Shelby, thank you. Thank you for your service today to our country in so many different capacities.

The men and women under your charge such as those mighty medics of the 341st Medical Group of Malmstrom Air Force Base in Great Falls, Montana, are truly unsung heroes that do keep our forces focused and objective every day at home as well as abroad, and we are sure thankful for their service.

As we work with the Administration to restore the very highest level of military readiness, it is important that we take time to review the medical readiness of our force, so truly, I appreciate your testimony here today. Thank you.

General West, in your opening remarks you spoke a bit about the Army's leading role in medical innovation. I understand the developments in regenerative medicine with totipotent stem cells have

strong potential to help servicemembers who have sustained serious injuries on the battlefield, or those who were diagnosed with diseases that might preclude their ongoing service.

One example I heard recently was from a Montana Guardsman who is battling multiple sclerosis, for whom this treatment might have a life altering effect, and any time you interact with men and women who have these horrible diseases, who do not have a lot of options, they are looking to hang their hope on something.

My question, General West, is how is the Army maximizing access to clinical trials of regenerative medicine and other leading edge technologies and treatments where no other viable treatment options exist?

General WEST. Senator, thank you for that question. The Army is extremely dedicated and leaning forward in ensuring we can get the best care to our patients, and the leading-edge research that is out there, too, to ensure that we can take advantage of that for our patients.

We partner with—for example, there is the Advanced Regenerative Manufacturing Institute, and we actually have a newly created Advanced Tissue Biofabrication Manufacturing Innovative Institute, where we are partnering with our civilian sectors to ensure that we get those technologies that are out there and have access to all the different clinical trials that are out there.

CLINICAL TRIAL

Senator DAINES. Let me ask a question on that. If we have a servicemember, because we are getting these inquiries, how would they engage if they wanted to have a chance at being part of a clinical trial? Where would they go?

General WEST. Senator, I will have to get back to you on the record on that.

[Information follows:]

Clinical trial choices are dependent on patient and provider preferences and criteria established by the FDA and other regulatory and research oversight bodies. Not all patients/study participants qualify for all trials. If a study participant meets study-specific criteria for enrollment, the participant would then knowingly consent to participate with the study's many known and unknown risks and/or benefits, which may include the possibility of assignment to a placebo (non-treatment) study group for certain types of trials.

Patients/family members/healthcare providers can search for and locate different types of clinical trials by searching the website: clinicaltrials.gov.

Clinical trials funded by the Congressionally Directed Medical Research Programs (CDMRP), that are approved by required regulatory and ethical review bodies, are registered with the clinicaltrials.gov website.

Senator DAINES. Okay. That would help us because we do get those inquiries, and they are doing some great innovative work there, but how to make that connection from folks in the field who are looking for something, and how do we get them in touch with folks who might be organizing that clinical trial.

General WEST. On a case by case basis, I can tell you sometimes there are questions—I will get emails literally as the Surgeon General saying do you know of any clinical trials, talk to my team at MRMC, the Materiel Research Command. There is a section there that does have kind of a view of all the clinical trials that are going on, kind of a consortium, and we pair them up that way.

I will make sure we can get the—

Senator DAINES. That would be helpful. Any family member here who has had somebody who had a disease where there is not a lot of hope and they are looking for hope, making that connection would be helpful. Thank you.

General WEST. Thank you.

ELECTRONIC HEALTH RECORDS

Senator DAINES. Ms. Cummings, I am pleased to see progress has been made on electronic health record system implementation. Echoing Chairman Cochran's sentiments, I feel this is critically important and should be fielded certainly without delay. I think you have heard a little bit of that consternation here today from the committee.

How are you prioritizing sites within each region for implementation, and when will the system be completely fielded throughout the Military Health Care System?

Ms. CUMMINGS. We are leveraging some commercial best practices in putting together our waiver schedule, so we have three regions in the Continental United States, two regions outside the Continental United States, and we are leveraging the—we want to make sure that as we convert a military treatment facility that we are capturing that entire region where servicemembers and their families might be seen at sister facilities. The Pacific Northwest is a great example.

So, we are moving from the smaller to the larger facilities, and when we get to Madigan, and we deploy at Madigan, we will have a single record, whether the servicemember is up at Oak Harbor and they need to come down to Madigan for care, or at Bremerton, so that is why we are using this regional approach, which is how we prioritized how we are deploying.

So, we are starting in the West, and then we are moving to the North and the South in the United States, and then moving outside of the United States, so we can take the lessons learned from our Continental United States' deployments.

Senator DAINES. When do you think you will have the West implementation completed?

Ms. CUMMINGS. We are looking at the West being completed by about the end of fiscal year 2019.

Senator DAINES. 2019. I assume Montana is in the West?

Ms. CUMMINGS. It is.

CYBERSECURITY

Senator DAINES. All right. Thank you. Regarding cybersecurity, this is always a concern, what measures have been incorporated in the GENESIS system to protect servicemembers' most sensitive data?

Ms. CUMMINGS. Protecting personnel health information is very important to the DoD and to myself as the PEO. So, we have worked with the DoD CIO as well as the DHA CIO, and our commercial hosting partner, to come up with a hosting solution that takes cybersecurity to a very high level.

So, we are looking at the architecture so we are able to inspect and defend the military, inspect and defend any information that

goes in and out of our data center, the part that stores our own personal data.

We are also looking at tools and we are looking at how we can leverage processes, so having 24/7 watches, and being able to work together with our commercial hosting partner to identify vulnerabilities and to eliminate them before they become problems.

Senator DAINES. Thank you. Thank you, Mr. Chairman.

Senator COCHRAN [presiding]. The time of the Senator has expired. The distinguished Senator from Alaska, Ms. Murkowski.

MEDICAL RESEARCH

Senator MURKOWSKI. Thank you, Mr. Chairman, and thanks to each of you for your leadership and all that you do.

General West, I will direct this question to you, it is kind of a follow on from what Senator Daines has raised about those who are afflicted with these horrible diseases to which there is seemingly no hope.

One issue that I choose to raise here before this appropriations subcommittee every year is the peer reviewed medical research accounts. This is a program that I have supported over the years, and one component of that program that I have great interest in is the ALS research program.

I think we know that unfortunately our military members have a higher incidence of ALS, a 60 percent higher rate, than the civilian population for reasons that we do not know, but what we do know is that currently, there is no cure, there is no treatment for ALS, and it is a horrible, horrible disease for an individual to live with.

We have seen over the past few years a funding level for that component of about \$7.5 million a year, we are kind of stuck at that level. Again, when you recognize the connection to our military, to our veterans, with this disease, it just seems to me this ought to be an area where perhaps we should be looking at better resourcing.

I would like your comments this morning in terms of first, the effectiveness of the important research program that we have going, both in terms of identifying causes and cures, but also in terms of identifying some therapies that might help ALS patients live more productive lives, and whether you are satisfied with the funding levels that we have seen over the years for this component.

General WEST. Senator Murkowski, thank you so much, and I really appreciate the support that you have had on this topic and this condition over the years.

I do appreciate since 2007 about \$62 million to help us identify research projects, and during that time, there has been 54 projects that involved the country's leading experts on ALS, to determine where we can get more information on cures and the etiology, why 60 percent of our veterans, what is it about our veteran population that they are higher, and actually Gulf War vets are two times more likely to have ALS for reasons unknown.

So, the good news is there is some progress that we can report. The development of small molecules, stem cell therapies, biologic, and then there are some gene therapies that are showing promise. Right now, there are four of these that have progressed to indus-

try-backed advanced drug development or at least advancement in determining that and one has actually moved into early phase clinical trials.

So, I am happy to report that investment has led to some very promising potential therapies in the future, so I appreciate the support of that, and we will continue to work diligently to determine with those experts more results for that, but I do appreciate the funding levels that have been put towards this very devastating disease. Thank you.

Senator MURKOWSKI. This will continue to be a priority of mine as well as other members here, but I appreciate the continuing efforts. Again, we do not understand the connection but what we do know for a certainty is this is a deadly, horrifying disease, and we have to be doing more, and what we are able to do working with DoD has been significant over the years. You note the progress. For those who are living with ALS, it is pretty dire right now.

General WEST. Thank you.

ARCTIC ENVIRONMENT RESEARCH

Senator MURKOWSKI. I want to ask another question about cold weather environments, and this is again directed to you, General West. You know this is a priority of mine. I take care of our men and women in uniform who are up in an Arctic environment, and sometimes it is cold, and sometimes it is very cold.

There was an exercise just a few weeks ago. I think they called it Arctic Pegasus, if I recall. It was an air operation where soldiers parachuted out over the North Slope doing an exercise, and it was much colder up on the slope than anyone had anticipated. I think they said it was 30 or 40 below.

The exercise mission that they designed actually did not prove to be so successful because what they ended up doing was helping retrieve many who either encountered frostbite or were threatened by frostbite, and they needed to get them out of there.

These are learning lessons that are pretty important, but it is a reminder to me that when we think about warfare, it is not always in the desert, and are we prepared? I do not think we have really focused on this aspect of warfare since the end of the Cold War.

Last year, we discussed the U.S. Army Research Institute of Environmental Medicine's work in this area. Can you briefly discuss where we are with that, along with future research efforts that are being developed for cold weather warfighting protection?

General WEST. Yes, Senator, and thank you for the question on that. Just as we have said before, our environment is unknown and unknowable. We do not know where we are going to be asked to fight, so we need to be prepared in all environments.

USARIEM, as you mentioned, has been looking at areas to increase the dexterity, because of course, in those environments, the dexterity of the fingertips and the freezing of the face, the difficulty for communication, are two areas that will diminish servicemembers' ability to use their weapons or whatever sophisticated systems required.

So, there are actually strategies they are using, different technologies to increase the blood flow to the fingertips and also having

systems that will help increase warmth and blood flow to the mouth and face area.

There is a research collaboration with actually the Army Mountain Warfare School. We are using the individuals there for some of these research areas, also partnering with U.S. Army Alaska to ensure any of these techniques and modalities that we are seeing from the cold weather initiative that we started in fiscal year 2017 to actually develop a program for sustaining the performance in these environments.

So, I believe we are going to be coming up with additional modalities to help. Again, it is mainly to try to increase blood flow to the areas to maintain dexterity. That is an area that is ongoing with research.

I had the opportunity also yesterday to go to the demonstration of the combat feeding of the soldiers, and there were special rations designed specifically for soldiers operating in cold environments. There was a calculation of the calories needed, the different types of nutritional supplements that can help our servicemembers be maintained in those environments as well.

So, it is an extremely important area of research for our teams there. Thank you.

Senator MURKOWSKI. General, I thank you for that. Mr. Chairman, you come from a warm part of the country, so you may not appreciate as much what this research really allows us to do. I am often reminded, and we talk about the need for sophisticated technologies to work in an Arctic and cold weather environment, but it is not even sophisticated technologies. It is utilizing a pen. A pen will not work in the cold.

So, you say we are going to use a pencil. If you cannot hold the pencil because your glove or your mitten is so boxy that you cannot even pick it up, it is just a reminder to us how debilitating the cold can be, but yet not only do we expect our men and women in uniform to be able to pick up that pencil, we expect them to be able to pick up that weapon, to untie something.

So, this is research that again is critically important. I appreciate the update, and I look forward to learning more about the advances that you have made.

Thank you, Mr. Chairman. Thank you for allowing me to go over my time.

ADDITIONAL COMMITTEE QUESTIONS

Senator COCHRAN. Thank you very much, Senator, for your participation, and the participation of all of our members during this hearing.

We would be happy to receive written statements from members of the committee, which will be included in the record. We will request that we have them within a reasonable time so they can be included in the record of the hearing.

[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 NADJA WEST

QUESTION SUBMITTED BY SENATOR THAD COCHRAN

MEDICAL RESEARCH

Question. This Committee has consistently recommended funding for increased medical research. In the fiscal year 2017 Defense Appropriations agreement that has passed the House of Representatives and is awaiting action by the Senate, Congress appropriated more than \$2.1 billion for medical research, a 7 percent increase over last year's level. How has increased medical research funding contributed to breakthroughs or positive outcomes that benefit our service members and society as a whole?

Answer. The increased medical research funding has contributed to numerous breakthroughs and positive outcomes that have been incorporated into practice or improved clinical care along the entire spectrum from prevention, detection, diagnosis, treatment, and rehabilitation. These advances have made a significant impact on healthcare and quality of life for Service Members, their Families, Veterans, and society as a whole. Below are a few examples of successes: Prevention efforts include an algorithm to diagnose precursor carcinoma lesions to inform treatment and help prevent later development of ovarian cancer; a novel listeria-based live recombinant booster vaccine to provide enhanced protection against tuberculosis; and further development of a Malaria vaccine to prevent the severe form of the disease in military personnel and travelers. Detection and diagnostics accomplishments include novel devices and assays like a fiber optic sensor system to determine when a patient has internal bleeding and may be in danger of going into hemorrhagic shock; portable systems for rapid assessment of traumatic brain injuries on sports or battlefields; an FDA-approved blood test to help determine the malignancy of ovarian masses prior to surgery; and assays to guide prostate cancer patients in their treatment decisionmaking (personalized medicine). Treatment achievements include Prazosin, an evidence-based treatment option approved for combat trauma nightmares and daytime hyperarousal symptoms; groundbreaking standard of care, FDA-approved drugs for treatment of ovarian, breast and prostate cancer; or novel drug treatments for infectious diseases such as norovirus, leishmaniasis, malaria, and fungal infections. Rehabilitation achievements include improved prosthetic sockets' cooling and fit which provide better care and functional performance to amputees; an FDA-cleared non-surgical assistive device for the blind that provides visual information via sensory substitution; biomaterial-based bone graft that facilitate bone-healing; and human skin substitutes that improve wound healing and minimizes risk infection.

QUESTION SUBMITTED BY SENATOR LINDSEY GRAHAM

TRANSFER OF OVERSIGHT AND MANAGEMENT OF MILITARY TREATMENT FACILITIES TO THE DEFENSE HEALTH AGENCY

Question. Section 702 of the fiscal year 2017 NDAA transferred oversight and management of military hospitals and clinics from the military services to the Defense Health Agency (DHA), and I understand that the Department is now developing courses of action for the Deputy Secretary to consider.—Will each of you assure me that you will facilitate a rapid and efficient transfer of the operations of those medical facilities to the DHA, and will each of you assure me that you will reduce the number of personnel in your headquarters and subordinate organizations to reflect the changing scope and size of your missions?

Answer. I am committed to rapidly and efficiently implementing the NDAA provisions through a Component Model with Service-specific intermediary commands and Service-specific medical treatment facilities (MTFs) that are aligned under the DHA for the management of healthcare delivery. The Component Model will accelerate the Military Health System's progress towards developing an operating model that reduces total management costs including reducing the total number of Service Members, civilian employees and contractors relating to headquarters activities, supports improved and efficient delivery of healthcare at military MTFs and enhances the Army's readiness capabilities.

QUESTION SUBMITTED BY SENATOR JERRY MORAN

DEFENSE HEALTH AGENCY'S NEW ROLE

Question. LtGen West, I understand that Defense Health Agency is assuming more responsibility over the services. Would a DHA run system help or hinder your ability to make decisions quickly and efficiently to provide the best care for our military men and women?

Answer. Deliberate planning using the Joint Staff Action Process with coordinated analysis incorporating input from all the Services and the DHA is essential to enhance decisionmaking associated with the transfer of management responsibilities for the delivery of healthcare in the MTFs to the DHA. DHA will be assuming more responsibility over the Services and quick and effective decisionmaking will require a Component Model with Service-specific Intermediary Commands and Service-specific MTFs that ensures the Department has the agility and flexibility to provide medically ready forces and a ready medical force to ensure the best care is provided for our military men and women.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

CHRONIC PAIN AND OPIOIDS

Question. Both service members and veterans suffer from chronic pain as a result of their dedication to protecting this country. Whether through combat-related injuries, or a result of the stress that is placed on their bodies while carrying equipment and managing multiple deployments, pain is a reality for many who serve in the military. With little known alternatives to treat pain other than through the use of prescription opioids, our military is increasingly relying on prescription painkillers to manage chronic pain. According to the 2008 Department of Defense Survey of Health Related Behaviors among Active Duty Military Personnel, 11 percent of service members reported misusing prescription drugs—a majority of which are opioid pain medications—up from 2 percent in 2002, and 4 percent in 2005. The amount of prescriptions written for pain relief by military physicians also quadrupled between 2001 and 2009, with nearly 3.8 million prescriptions written for pain as a result of combat injuries. Furthermore, with suicide rates in the military on the rise, a reported third of suicide deaths in 2009 were a result of prescription drugs. The numbers reported by the Department of Veterans Affairs are even more staggering, with the amount of prescriptions written for opioid painkillers having increased 77 percent between 2004 and 2012, and more than 1 and 3 veterans in 2012 having received prescription opioids to manage their pain. In recent years, States like Vermont have seen an increase in opioid substance abuse, which is why I have worked to strengthen resources for law enforcement and health agencies to address the epidemic. But more must be done to address this issue at the Federal level, especially as it relates to our service members and veterans. As the opioid crisis worsens among members of the military and our veteran population, why is finding opioid alternatives to treating pain important to the DoD? What has been the value been for creating new research programs through the Congressionally Directed Medical Research Program (CDMRP), such as the breast cancer research program, on military personnel and their families? What is the DoD doing to address opioid abuse and addiction to opioid painkillers? Has the DoD considered expanding research on opioid-alternative methods to addressing chronic pain as a result of combat and deployment-related injury and stress?

Answer. Army Medicine is focused on non-opioid pain management alternatives in order to improve the health of our Soldiers and increase readiness of the force. Reducing opioids is important as opioid use impacts readiness and increases a Soldier's risk at becoming dependent on medications. In 2009, Army Medicine recognized the concern with the opioid crisis and realized a need for opioid-alternatives. Army Medicine's recognition that opioids are not the sole treatment for pain resulted in the development of the Army Comprehensive Pain Management Program (CPMP) and strategically located Interdisciplinary Pain Management Clinics (IPMCs). The Army utilizes the "Stepped Care" approach to pain care beginning with self-care, moving through the Army Medical Homes (AMH), medical neighborhoods and the IPMC. The IPMCs provide integrative and complementary therapies that include: interventional pain management, primary care provider support, nurse case managers, chiropractors, behavioral health providers, clinical pharmacists, occupational therapists, physical therapists, movement therapists, acupuncture and medical massage. In calendar year 2016, the Army IPMCs provided 125,000 pain visits. Additionally, the IPMCs serve as the hub for subject matter expert (SME)

support to the primary care providers and AMH. New research programs through CDMRP have provided great value to the Army, the Department of Defense and the Nation by providing research that advances service-connected and military family relevant disease, injury and wellness efforts; enhancing investments in underfunded research areas; filling research gaps; and stimulating new lines of scientific inquiry. For over two decades CDMRP has been a steward of these funds, on behalf of Congress. These programs are coordinated among the Services and with significant input from experts within other federally funded agencies and civilian institutions. Pain is an important aspect of injury and disease related to many of the research programs within the CDMRP, particularly those focused on orthopaedic, spinal cord and traumatic brain injuries, psychological health, Gulf War illness, neurofibromatosis, multiple sclerosis, and various cancers. In addition, in some years the CDMRP's Peer Reviewed Medical Research Program has Congressionally-mandated topic areas relevant to pain management. In fiscal year 2016, for example, these included Chronic Migraine and Post-Traumatic Headache, Non-Opioid Pain Management, Post-Traumatic Osteoarthritis, Psychotropic Medications and Rheumatoid Arthritis. Information on fiscal year 2016 awards will be available later this year. Through fiscal year 2015, CDMRP has funded more than 100 awards for over \$140 million in research relevant to pain management, including studies understanding the experience, physiology, mechanisms, and treatment of pain. Ongoing research exploring alternatives to the treatment of pain with opioids includes identification of novel therapeutic targets as well as studies of acupuncture/acupressure and electrical stimulation. CDMRP coordinates primarily with Clinical and Rehabilitative Medicine/Joint Program Committee 8 (JPC-8) and secondarily with Military Operational Medicine/JPC-5 and Combat Casualty Care/JPC-6 to leverage the advances and outcomes from these projects for military needs. In October 2016, in order to improve access, continuity and quality for substance abuse and addiction, the Army began relocating and integrating Substance Use Disorder Clinical Care with behavioral health clinics, including Embedded Behavioral Health Teams. This approach brings substance use and behavioral health providers together to form teams organized around the patient. All providers now use the electronic health record to share information and coordinate care. Teams can better identify and address co-occurring mental and physical illness in patients with Substance Use Disorders, to include opioid use disorders. Army Medicine established 5 intensive outpatient programs to deliver care to Soldiers who require an increased level of treatment than a standard outpatient clinic. Addiction Medicine Intensive Outpatient Programs (AMIOP) improve care integration, increase the opportunity for Command involvement, and create earlier, more ready access to higher level care. At end state in OCT 2017, the Army will have 11 AMIOPs located in MTFs at installations with the greatest need. Army Medicine is actively exploring opportunities for improvements and advancements in opioid-alternative chronic pain treatment modalities through various research projects. These projects include: "Integrative Modalities Plus Psychological Physical Occupational Restoration Therapies (IMPPORT) Trial;" "An Observational Safety and Efficacy Study Comparing a Non-Equipment Based Exercise Protocol to an Equipment Based Exercise Protocol for the Treatment of Chronic Low Back Pain;" and "Rehabilitation of Neuro-musculoskeletal Injuries within an Intensive Outpatient mTBI and Pain Rehabilitation Program: Outcome Success for Special Operators."

TOXIC EXPOSURE AND PREVENTATIVE MEASURES

Question. Over 100,000 veterans have registered with the VA's Airborne Hazards and Open Burn Pit Registry, with this number increasing each year. I commend the VA and the Department for acknowledging this problem and creating a program that identifies those who were exposed, so that treatments can be delivered. I also believe, as I hope you do as well, that our Soldiers, Sailors, Marines and Airmen, should never have been exposed to such toxic conditions in the first place. With the staggering human and financial costs of toxic exposure more apparent than ever, do you believe the Department fully recognizes the importance of ensuring healthy environmental conditions for our service members? What measures are in place to protect both those currently deployed and future generations of service members from similar exposures?

Answer. Protecting Soldiers, Sailors, Marines, and Airmen from exposures to occupational and environmental health hazards is essential to maintaining the readiness of our Service Members while they are deployed. Operational requirements may prevent us from ensuring completely healthy environmental conditions during deployment, but we strive to minimize those threats when possible and to document and archive exposures when they occur. We also strive not to make environmental condi-

tions worse through our own actions. The Army is committed to protecting its' Soldiers and Civilians from environmental hazards to the extent that military operations allow. Most Army combat and peacekeeping deployments are to developing or former industrialized nations with rudimentary or older industrial technology that produces elevated levels of toxic emissions while lacking effective pollution control measures. We work diligently to identify and assess these hazards and to make recommendations to commanders on how to reduce exposure risks. Public Health teams, both deployed and stationed worldwide, work closely with the Combatant Commands to continuously assess and address identified health risks. A key component of the Army's public health mission is to conduct initial occupational and environmental health surveillance to determine what potential hazards may exist at a given location. These hazards may include: toxic industrial chemicals and toxic industrial materials from local sources in the air, water, or soil; ionizing radiation; non-ionizing radiation; physical hazards such as extreme noise, heat, cold, and altitude; food-, water-, vector-, and arthropod-borne threats; endemic diseases; and any by-products of US forces activities (i.e., noise, smoke from burn pits, exhaust). Identified hazards are documented in a site-specific Occupational and Environmental Health Site Assessment and are assessed for potential impacts on the current mission and for long-term health risks to exposed Soldiers. Identified hazards are eliminated, reduced, or otherwise avoided as much as possible within mission constraints. Occupational and Environmental Health hazard surveillance activities are conducted when hazards cannot be eliminated. A decision must be made by commanders to accept the health risks associated with the exposure to support the operational mission. The mandatory post-deployment health assessment process asks Soldiers (and other Service Members) to identify and discuss with a healthcare provider any concerns they have about exposures during deployment. We are also committed to preserving records of exposure measurements that will provide individual personnel histories of both occupational and environmental health exposures. Environmental data from deployments are entered in the Defense Occupational and Environmental Health Readiness System—Industrial Hygiene, or DOEHRs-IH. This database is collecting and building a lifetime record of exposures to environmental hazards such as industrial and urban pollution. When possible, it also identifies personnel who have been exposed to each hazard. Ongoing research into wearable technology will provide the future capability to directly monitor individual exposure data for all Soldiers and to more closely assess links between occupational and environmental exposures and health outcomes.

QUESTIONS SUBMITTED BY SENATOR JON TESTER

NATIONAL GUARD AND SUICIDE

Question. Montana is home to over 4,000 Guardsmen and reservists. There are currently referral resources available to Guardsmen on drill weekends, but no dedicated resources for ongoing care and support. Last summer, I wrote to Defense Secretary Carter about efforts being made by the Defense Suicide Prevention Office. My concern was that over 60 percent of Army Guard suicides were folks who had never deployed, and had limited access to mental healthcare. Unfortunately, DoD had the National Guard Bureau respond to the letter, which I think gets to the root of the problem. Issues like suicide prevention and mental care need to be monitored and coordinated at the highest level and across the services. They should not be delegated. How are your respective services ensuring that your reserve and Guard components are able to tap into your collective mental and behavioral healthcare resources? Is DSPO tracking the amount of operation and maintenance funds required to fund behavioral health support programs for the reserve components as mandated in the fiscal year 2012 NDAA? When will the services implement a Program Element Code for suicide prevention?

Answer. The USAR Psychological Health Program's website provides resources for Commanders, Soldiers, and Families in order to ensure that Soldiers maintain optimum mental health (<http://www.usarphp.org/home.aspx>). The program is administered by six contracted Coordinators for Psychological Health located at six locations within CONUS. The USARC Psychological Health Program serves to enhance resilience and assist with recovery of US Army Reserve Service Members and their Families through outreach, education and training, non-stigmatizing behavioral health screenings and referral resources. The program provides support for psychological health concerns to ensure Service Members and their Families are ready and resilient to carry out their mission. We connect geographically dispersed Service Members and their Families with relevant resources within their community. The Na-

tional Guard 54 States and territories each have, at a minimum, one Director of Psychological Health (DPH) whose primary responsibility is assessment, referral, and case management of service members with Behavioral Health conditions. Each DPH works collaboratively with any embedded Behavioral Health Officers (BHO) assigned at the unit level. The DPHs coordinate/partner with local, State and Federal programs to establish an effective (comprehensive?) referral network for their Soldiers. The Chief of Behavioral Health assigned to the National Guard Bureau provides oversight to the NG Behavioral Health Program. NGB helps to procure and distribute resources down to the State level to retain a workforce with a comparable ratio. NGB also works to create an effective, standardized holistic program of Behavioral Health. The Defense Suicide Prevention Office (DSPO) provides advocacy, program oversight, and policy for Department of Defense suicide prevention, intervention and postvention efforts to reduce suicidal behaviors in Service Members, Civilians and their Families. DSPO actively engages and partners with the Military Services, other Governmental Agencies, Non-Governmental Agencies, non-profit organizations, and the community to reduce the risk of suicide for Service Members, Civilians, and their Families. As such, the DSPO portfolio includes data surveillance, program assessment, policy oversight, and outreach. With respect to operation and maintenance funds required for Reserve Component behavioral health support programs, DSPO reports it is currently not tracking this requirement as it falls under the Health Affairs section of the fiscal year 2012 NDAA. Compliant with the fiscal year 2012 NDAA, US Army Reserve Command (USARC) has established a program funding line for their Psychological Health Program, but USARC reports the funding line has not been fully funded. With respect to a specific Program Element Code for suicide prevention, coordination with Army G-1 staff is ongoing. Of note, USARC reports tracking funding execution of the Suicide Prevention Program through the Management Decision Package (MDEP), and the MDEP code for Suicide Prevention is VSPV.

NATIONAL GUARD HEALTHCARE COVERAGE

Question. According to the 2014 Status of Forces Survey, 28 percent of National Guardsmen stated that they had no medical coverage. This would mean roughly 128,000 National Guardsmen do not have health insurance. Especially in rural areas with limited options, younger Guardsmen have a tough time with Tricare Reserve Select monthly premiums. I have also heard of problems with gaps in coverage when their families switch to Tricare Prime while activated. What can be done to make Tricare Reserve Select less expensive for younger Guardsmen and how can Tricare Prime limit gaps in coverage around activation?

Answer. TRICARE Reserve Select (TRS) is the premium-based health plan available for purchase by qualified members of the Selected Reserve. TRS coverage is similar to TRICARE Standard and TRICARE Extra. Covered Service Members and Family Members under TRS may access care from any TRICARE authorized provider, hospital or pharmacy, whether in the TRICARE network or not. The government subsidizes the cost of the program with members paying 28 percent of the cost of the premiums. For calendar year 2017, premiums were \$47.82 per month for member only coverage and \$217.51 per month for member and family coverage. Section 748 of the fiscal year 2017 National Defense Authorization Act (NDAA) directed the Defense Health Agency (DHA) to conduct an assessment of transition to TRICARE program by Families of members of reserve components called to active duty. We must defer to the DHA to see how they will address any concerns with TRS costs or to ease transition issues for activated members of the Reserve and National Guard based on Section 748 of the fiscal year 2017 NDAA.

TRICARE ISSUES

Question. Montana is home to a disproportionate number of military retirees. Many of them have adult children and call my office to ask why Tricare Young Adult is so expensive and has so many conditions. ? How can Tricare better provide for this population to bring it more in line with the same standard as ACA?

Answer. The TRICARE Young Adult (TYA) program is a premium-based healthcare plan available for purchase by qualified dependents. TYA offers TRICARE Prime and TRICARE Standard coverage worldwide and meets the definition of "minimum essential coverage" under the Affordable Care Act (ACA). TYA provides coverage up to age 26 and requires payment of monthly premiums in addition to the cost shares and copayments for each respective plan. The National Defense Authorization Act of 2011 mandated that TRICARE set TYA premiums to cover the full cost of healthcare received by the program's beneficiaries. In 2016, TYA premiums rose substantially due to the fact that 2016 marked the first time

TRICARE had enough actual cost data to set the premiums based on actual costs rather than predicted cost. On January 1, 2017, the monthly payment for beneficiaries using TYA Prime rose from \$306 to \$319, while the monthly premium for TYA Standard decreased from \$228 to \$216 per month. We must defer to the Defense Health Agency to see how they will address any concerns with TYA costs.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

OPIOID EPIDEMIC

Question. The opioid epidemic is one that spans the entire country, with some of the most vulnerable populations being active service members and veteran's battling injuries sustained in our most recent wars. We owe it to the men and women who have already sacrificed so much to construct a viable plan to combat this epidemic. Each service must have a holistic understanding of opioid use—both prescriptive and illegal abuse—within their formations, and should apply progressive thought towards non-opioid pain management alternatives. What are you seeing with respect to the use of opioids across the force, and how does this compare to national trends?

Answer. The Office of The Surgeon General does not collect information on opioid abuse similar to that which is collected in civilian sector. Despite this limitation, the Army and other Services have implemented many programs intended to reduce the use of opioids in our populations, including the Comprehensive Pain Management Program. In fact the latest report from the Army's Pharmacovigilance Center's showed that opioid use peaked in 2012 with 26 percent of the total active duty population, and 29 percent of Army Service Members, receiving at least one opioid prescription during the previous 12 months of the fiscal year. Since that time, opioid use has declined each year with fiscal year 2016 rates at 21 percent for the total active duty population and 23 percent for Army Service Members. This same analysis also evaluated chronic opioid use, which is defined as a Service Member who received 90 days or more of opioids within a 6-month timeframe during a fiscal year. Chronic opioid use peaked in fiscal year 2007, with use rates for the Army and total active duty population at 12 percent and 10 percent respectively. Chronic opioid use, in fiscal year 2016, has declined to 6 percent for the Army and 5 percent for the total active duty population.

NON-OPIOID PAIN MANAGEMENT

Question. Are there any efforts within military medicine to develop non-opioid pain management alternatives? If so, when are those alternatives most appropriate as replacement therapies?

Answer. Yes, Army Medicine continually strives to provide alternatives to opioid therapy through holistic, integrative and complementary therapies at all levels of the medical continuum of care. The utilization of a stepped care model for pain management ensures the appropriate level of pain care, including alternatives, is available and delivered to patients through the continuum of acute and chronic pain. Army Medicine pain management begins at the Army Medical Home where a multidisciplinary team led by the Primary Care Pain Champion supports Primary Care Managers utilizing a stepped care approach, self-care and emphasizing mindfulness to all beneficiaries. The pain care continuum progresses to the Army Integrative Pain Management Centers (IPMC) where additional consultative interventional and complementary therapies further support the patient's pain care needs. These therapies include interventional medicine, physical therapy, occupational therapy, chiropractic, nutrition, medical massage, acupuncture, and movement therapy such as Yoga and Tai Chi). Through the availability of these therapies, the twelve IPMCs provide alternatives to opioid treatment for acute pain and minimize progression to chronic pain.

OPIOID ABUSE EDUCATION

Question. How are you educating service members on the risks of opioid abuse? Are these mandatory for individuals receiving opiate prescriptions?

Answer. Each Soldier who obtains new prescriptions from a medical treatment facility (MTF) will receive instructions for that medication. The instructions are mandatory for each new prescription and controlled medications. In addition, all providers who prescribe opioids are required to complete Opioid Prescriber Safety Training which incorporates the necessity of provider education to the patient about opioid use, side effects, and alternate therapies available for pain control. The Comprehensive Pain Management Program provides information to Soldiers and clinicians on alternatives for pain therapy but does not directly provide Soldier edu-

cation on opioid use or abuse. Our marketing efforts on opioid alternative therapies are primarily in the form of brochures, open house and informational booths during pain awareness month.

INFECTIOUS DISEASES

Question. Men and women in the military often find themselves in these hot zones where emerging infectious diseases are endemic. In the Asia Pacific, for example, malaria, dengue, TB, and other emerging infectious diseases pose a risk to our soldiers, sailors, airmen, and Marines in the region, whether they are stationed there or are supporting theatre security cooperation exercises. Continued research and prototyping is necessary as we continue to build medical defenses for our service members as they execute missions in at-risk environments—and this is not an endeavor the DHP should go alone. Invaluable relationships have formed with departments across the government like the CDC and HHS, and have brought to fruition incredible advances for our service members and citizenry alike. How important is bio-surveillance to protecting our troops from diseases when they are deployed?

Answer. Bio-surveillance is essential in the fight against known and emerging infectious diseases, as witnessed during the recent Zika virus outbreak. Molecular methods currently available and under development allow healthcare providers to appropriately tailor patient treatment, allow public health personnel to select proper control methods for specific disease vectors, and support education on the possible dangers and effects of disease for individuals in impacted areas. Effective bio-surveillance encompasses diverse but coordinated activities such as field and laboratory analyses focused on identification and characterization of naturally-occurring and man-directed disease threats. Military operational readiness requires protection of our Service members and military service animals from these threats. Early identification of disease threats allows us to employ countermeasures to preserve our fighting strength. These countermeasures include vaccines, early disease detection systems, laboratory testing, surveillance, prophylactic medications, therapies, and personal protective equipment. Additional surveillance capabilities for chemical and radiological threats are also essential for force protection.

PARTNERSHIPS WITH CDC AND HHS

Question. How do you work with partners like CDC and HHS to promote prevention and treatment through their international bio-surveillance programs? So would you say it puts more or less risk on your ability to protect our troops when these partner agencies have their budgets cut, jeopardizing their international bio-surveillance programs?

Answer. An effective bio-surveillance system requires a network of military and non-military experts and tools. We work closely with the Centers for Disease Control (CDC) and other governmental agencies, our allies, host nation partners, academia, and non-governmental organizations to ensure we collect and analyze as much relevant information as possible. We share methods and data, using many of the same tools as our partners, and collaborate closely on lab-based surveillance. One example is tracking emerging influenza strains: the DoD is the single largest contributor of influenza specimens acquired around the globe to inform component strains for each year's national influenza vaccine. We collaborate with our DoD liaison officer at CDC on large-scale responses to epidemics such as Zika and to pandemic influenza preparedness. We also respond jointly to more localized disease outbreaks which impact Soldiers. Our installation public health personnel work closely with their civilian counterparts at all levels to synchronize surveillance and response activities. We are working to strengthen our relationship with the CDC in the areas of understanding and surveillance of vector-borne diseases (VBD), such as Zika or Lyme Disease, by linking Army public health entomological and laboratory efforts with the CDC-supported VBD academic centers of excellence. We also work closely with the Defense Health Agency—Armed Forces Health Surveillance Branch—Bio-surveillance Division and the Defense Threat Reduction Agency's Bio-surveillance Ecosystem (BSVE). The BSVE is a "Whole of Government" capability with partners in industry and academia that provides a suite of common tools for analyzing and predicting global outbreaks from a variety of structured and unstructured data sources. Ultimately, the collaborative and synergistic nature of bio-surveillance activities that supports our ability to protect our troops is jeopardized when partner agencies such as HHS/CDC have fewer resources. A lack of funding in the area of international bio-surveillance negatively impact our ability to protect those who serve our Nation. Diseases do not recognize borders and bio-surveillance requires a whole of government approach. The ability to track a disease internationally is likely to decrease as partner agencies' budgets grow smaller.

PARTNERING WITH HHS

Question. I know DoD works closely with HHS to develop medical countermeasures, including the programs managed by the Biomedical Advanced Research and Development Authority—BARDA. You have been able to share costs and reduce redundancies. Will each of you elaborate more on DoD's partnership with HHS on developing medical countermeasures and discuss the potential impacts to DoD's efforts if HHS funding, including BARDA, is reduced?

Answer. Significant reductions in HHS funding will impact DoD Medical Countermeasure (MCM) efforts, including those within Army and Defense Health Medical Research, Development and Acquisition (RDA) programs. The greatest impacts will affect efforts developing MCM for detection, prevention and treatment of biological warfare threat agents, global endemic and emerging infectious diseases. DoD invests in applied and advanced technology development research focused on delivery of MCM solutions to the Warfighter. Thus, DoD relies on and leverages the basic research supported by the National Institutes of Health (NIH) to feed the pipeline for subsequent DoD research and development activities. In addition, the majority of products in our development pipeline are FDA-regulated products. Funding reductions within the FDA would impact the development progress and timeline for those regulated products and delay our ability to deliver needed capabilities to the warfighter. The Military Infectious Diseases Research Program (MIDRP) has several areas of research and development where the HHS provides significant funding to the Army supporting countermeasure efforts for: Hantavirus and other lethal viruses, Malaria, Bacterial Diarrheal Diseases, Zika Virus and the Military HIV Research Program. HHS also funds research and development in the broader medical research community which enhances and accelerates Army's MIDRP efforts. A decrease in HHS funding may also threaten the funding and support of military overseas medical research laboratories which are on the forefront of early warning and are vital infectious disease research infrastructure platforms for the military and the Nation.

HHS'S MEDICAL COUNTERMEASURES

Question. DoD has been able to leverage HHS' medical countermeasures development by providing funding to HHS, including adding studies to an existing development program to address a DoD-specific need. This ensures that HHS's final medical countermeasure product can be used by DoD as well, saving the military time and money. Can you comment on this and discuss how a reduction in HHS funding could impact DoD's ability to address the CBRN [chemical, biological, radiological, and nuclear] threats that our military currently faces abroad?

Answer. The Army leverages Department of Defense (DoD) and Department of Health and Human Services (HHS) medical countermeasure (MCM) research, development, and acquisition (RDA) activities to not only save time and money, but also to collaborate in meeting both civilian and DoD-specific chemical, biological, radiological and nuclear defense needs. For example, DoD purchases anthrax vaccines and smallpox vaccines from the HHS Strategic National Stockpile (SNS) for vaccination of DoD forces at high risk of exposure. In addition, the DoD funds studies to HHS development activities when these additional studies will address a DoD-specific need (e.g., MCM animal model development to address the Ebola virus). DoD also has a relationship with Biomedical Advanced Research and Development Authority (BARDA) to fulfill the requirement to "establish stockpiles of vaccine against H5N1 and other influenza subtypes determined to represent a pandemic threat...adequate to immunize approximately 1.35M persons for military use". DoD has a support agreement with BARDA and uses their acquisition to purchase pandemic influenza vaccine, and once purchased for the storage and stability testing of that bulk vaccine with the manufacturer. DoD coordinates with and considers recommendations from BARDA before purchasing vaccines, saving valuable time. Reductions in HHS funding will impact the opportunities for collaboration between HHS and DoD in MCM RDA activities if critical product research or development is delayed or cancelled. For example, reductions in HHS funding against the ongoing work in Nerve Agent Antidotes or vaccines and drugs for Zika, Ebola, Middle East Respiratory Syndrome Coronavirus, and Acute Radiation Syndrome may lead to unnecessary risk to our troops. It may also reduce the ability of the DoD to obtain SNS MCM for both routine use or wartime contingency purposes.

QUESTIONS SUBMITTED BY SENATOR TAMMY BALDWIN

ROLE OF WEST POINT IN DOD-FUNDED TBI RESEARCH

Question. The Medical College of Wisconsin plays a leading role in a long-term joint longitudinal study sponsored by both DoD and the NCAA that will build a deeper and richer understanding of concussion injuries. This public-private partnership is being led by the CARE Consortium, which is comprised of more than 30 institutions, including the four military service academies, and is close to achieving the goal of enrolling 30,000 individuals in the study. This total includes servicemembers at the military academies. The House DoD Appropriations committee reports for fiscal year 2016 and fiscal year 2017 included language affirming congressional support for the public-private partnership designed to understand and improve treatment of traumatic brain injuries and to support further studies. What has been West Point's involvement in the study to date? How has West Point leadership viewed the public-private partnership aspect of the study? What are West Point's plans for continued involvement in the research grant?

Answer. The leadership and research expertise at West Point are pivotal to the successful execution of the NCAA study, Concussion Assessment Research and Education Consortium (CARE), and a second parallel study (the Service Academy Study) which looks at the effects of concussion of non-NCAA athlete Students. The CARE study recruits NCAA athletes from 29 schools; 26 civilian schools and 3 Service Academies (USMA, USAFA and USCGA). Together they have recruited 22,366 athletes, and nearly 5 percent are West Point Cadets. Of the 1,513 concussions captured in the CARE population, about 4.3 percent are West Point cadets. The second concussion study ongoing at West Point, the Service Academy Study, parallels the CARE study in many ways. However, it involves students at the Service Academies not civilian institutions. The Service Academy study enrolled 7,089 non-NCAA students and West Point's efforts represent nearly 50 percent of the subjects. Approximately 508 concussions have been captured in this population, and 40 percent of those injuries are in West Point Cadets. West Point has clinical researchers on both studies, and is, therefore, facilitating collaboration and sharing of the data from the Service Academy study to the civilian investigators on the CARE study. West Point leadership is supportive of the partnership, noting that the outcomes of the study will provide benefit to both the civilian and military sectors. The Superintendent, Commandant, and Military Medical Treatment Facility Commander have been supportive and synchronous in the communication and coordination of the NCAA-DoD CARE and Service Academy Concussion Study. In February, the Superintendent and West Point researchers demonstrated commitment to the study through involvement with the NCAA Sports-Related Concussion Summit in California. Additionally, West Point will be hosting a Concussion Summit in April of this year. The West Point leadership has also met with The Surgeon General of the Army on multiple occasions to discuss and ensure support to the ongoing DoD-NCAA collaboration. The West Point clinical research team plans for continued collaboration with the NCAA group in order to conduct additional concussion-related research at the USMA. Now that the initial CARE Study questions have been answered, the Army understands that the principal investigators plan to submit CARE 2.0 for funding from the DoD (with matching funding offered from the NCAA). West Point also plans to maintain involvement in the DoD Service Academy study of the effects of concussion on Military performance, which parallels the DoD-NCAA CARE study. The Service Academy study will continue to leverage the infrastructure of the "Longitudinal Study on Traumatic Brain Injury Incurred by Members of the Armed Forces in Operation IRAQI FREEDOM and Operation ENDURING FREEDOM," a 15-year longitudinal study that was Congressionally Mandated in 2007.

GULF WAR ILLNESS

Question. I have been proud to help champion funding for the Gulf War Illness Research Program (GWIRP) within the Congressionally Directed Medical Research Program (CDMRP), and I continue to be heartened by the remarkable progress researchers have made toward healing our Gulf War veterans. That is why I am alarmed by reports from CDMRP-funded medical researchers that they are facing barriers to continuing this progress, namely that the Defense Manpower Data Center (DMDC) repeatedly denies their requests to access the data required to reach potential volunteer research study subjects. Making matters worse, many researchers report that DMDC has not provided definitive information regarding the current requirements for providing data to non-Federal entities. I fully support the need to secure the private information of servicemembers and veterans. For example, last year I authored the Veterans' Identity Theft Protection Act to direct VA to dis-

continue the use of Social Security numbers to identify veterans. It is critical that private information be managed securely by authorized users only. I also believe that if a federally-funded research institution has adequate IT security systems in place, as determined by the Federal Government, the interests of Gulf War veterans are best served by the secure sharing of data. In this context, such data includes veterans' contact information, but does not include medical histories or personnel records. Lieutenant General West, do you agree that CDMRP-funded GWIRP researchers need access to DMDC data to ensure sufficient and statistically significant numbers of research study subjects? What do you understand to be DMDC's policies for sharing data with Federal and non-Federal entities? What IT security standards are required? What can you do to help establish procedures to allow CDMRP-funded researchers and VA-funded researchers to utilize DMDC data?

Answer. Yes, access to information about Veterans within the Defense Manpower Data Center (DMDC) would facilitate research recruiting efforts and may help researchers gain statistically significant numbers of subjects who chose to take part in GWIRP research. DoD policy dictates that sensitive information (to include Name, Address, SSN, DoD ID, etc.) must be protected and that protection involves security assurances relative to: transport or transmission of information, the enclave in which information is housed, personnel with access to information, and disposition or release of information. Requesters must be U.S. Federal Government (military and civilian) or U.S. Federal Government contractors. Non-DoD investigators must have a DoD sponsor (DoD Civilian or Military Officer). The system receiving DMDC data must be DoD accredited or have other Federal equivalent accreditation (DIACAP or RMF). If networks do not meet these accreditation standards, DMDC is unable to authorize the release of the requested sensitive information. To help CDMRP-funded researchers utilize DMDC data, we can encourage our funded investigators to collaborate with DoD investigators and even assist in establishing these collaborations. There are two possible options to facilitate increased access to DMDC information: (1) A DoD investigator with access to DMDC information could allow a collaborating non-Federal researcher to access and use the data physically on the accredited Federal system; or (2) allow a virtual private network connection for the non-Federal researchers to access the data via DoD networks. Once collaboration with a DoD investigator is established, the DMDC would confirm that any 3rd party systems are DIACAP or RMF accredited before the information is shared. The DMDC would then enter into a Memorandum of Understanding with the DoD investigator stating that accreditation will be confirmed prior to sharing of data and that the data will be protected in accordance with the Privacy Act of 1974.

QUESTIONS SUBMITTED TO VICE ADMIRAL C. FORREST FAISON, III

QUESTION SUBMITTED BY SENATOR LINDSEY GRAHAM

TRANSFER OF OVERSIGHT AND MANAGEMENT OF MILITARY TREATMENT FACILITIES TO THE DEFENSE HEALTH AGENCY

Question. Section 702 of the fiscal year 2017 NDAA transferred oversight and management of military hospitals and clinics from the military services to the Defense Health Agency (DHA), and I understand that the Department is now developing courses of action for the Deputy Secretary to consider. Will each of you assure me that you will facilitate a rapid and efficient transfer of the operations of those medical facilities to the DHA, and will each of you assure me that you will reduce the number of personnel in your headquarters and subordinate organizations to reflect the changing scope and size of your missions?

Answer. Navy Medicine is committed to working with Congress, the Defense Health Agency, and the other Military Departments to improve the Military Health System (MHS). As such, the Military Departments are actively engaged in implementing the major transformation of the MHS as directed by Section 702 of the fiscal year 2017 NDAA. An interim report, as required by law, was submitted March 31, 2017. This report reflects the comprehensive evaluation of a number of courses of action and supports the Department's decision to implement the component model. While developing the component model that will fulfill these statutory requirements, the Services continue to work towards harmonizing the roles and responsibilities of the DHA and Military Departments. As part of the requirement for the second interim report, opportunities to streamline duplicative processes will be highlighted. It is expected that there will be reductions in the total personnel as the MHS eliminates unnecessary duplication and captures efficiencies. Opportunities to reduce specific headquarters-related personnel will occur as a result of the transi-

tion of MTF administration and management responsibilities from the Service Medical Departments to the DHA.

QUESTION SUBMITTED BY SENATOR JON TESTER

TRICARE ISSUES

Question. Montana is home to a disproportionate number of military retirees. Many of them have adult children and call my office to ask why Tricare Young Adult is so expensive and has so many conditions. How can Tricare better provide for this population to bring it more in line with the same standard as ACA?

Answer. The TRICARE Young Adult (TYA) program is a premium-based health plan available for purchase by eligible dependents. The National Defense Authorization Act for Fiscal Year 2011 (NDAA for Fiscal Year 2011) directed the Department of Defense (DoD) establish the TRICARE Young Adult (TYA) program to provide an extended TRICARE Program coverage opportunity to most unmarried children under the age of 26 of uniformed services sponsors. TYA aligns with health insurance coverage requirements established by the Affordable Care Act (ACA). Two health plans are available for purchase, TRICARE Prime (managed care option) or TRICARE Standard (preferred provider option), which provides robust health insurance benefits, worldwide coverage, and meets the ACA's definition of minimum essential coverage. As directed in 10 U.S.C. § 1110b, DoD is required to establish and align TYA monthly premiums to cover the full cost of the program. Previous years' premiums were lower because TRICARE did not have sufficient cost data to set annual premiums. These premiums were adjusted in 2016 to be cost-neutral to the government. They are adjusted annually and are not subsidized by the DoD, unlike other TRICARE entitlement programs. While TYA is the only option for eligible dependents to access and purchase a TRICARE health plan that would otherwise not be available, beneficiaries can consider alternative healthcare insurance options to meet the ACA's individual mandate. Other health plan options that TYA-eligible beneficiaries could consider include, but are not limited to: parent's commercial health insurance plan, employer-sponsored health plans, State or Federal health insurance exchanges, college or university student health plans, or Medicaid.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

OPIOID EPIDEMIC 2

Question. The opioid epidemic is one that spans the entire country, with some of the most vulnerable populations being active service members and veteran's battling injuries sustained in our most recent wars. We owe it to the men and women who have already sacrificed so much to construct a viable plan to combat this epidemic. Each service must have a holistic understanding of opioid use—both prescriptive and illegal abuse—within their formations, and should apply progressive thought towards non-opioid pain management alternatives. What are you seeing with respect to the use of opioids across the force, and how does this compare to national trends?

Answer. In contrast to national trends, which are increasing, opioid prescribing and use within the Navy is on the decline. The Navy Comprehensive Pain Management Program (NCPMP) has focused on addressing the challenges presented by opioids across Navy Medicine. In December 2013, a Long-term Opioid Therapy Safety (LOTS) working group, began developing a methodology to monitor the Navy's compliance with the VA/DoD Opioid Therapy Clinical Practice Guidelines (CPG). This CPG was released in February 2017 by the Department of Veterans Affairs and Department of Defense, with guidance to manage opioid therapy for chronic pain and provides critical decision points, along with clear evidence-based recommendations on minimizing harm and increasing patient safety in patients requiring opioid therapy. For the Navy, a patient is considered a long-term opioid therapy (LOT) patient if they are consistently taking opioids for at least 90 days. For fiscal year 2016, the Navy beneficiary population had approximately 366,569 patients who were prescribed an opioid. Of those patients, 4,153 were considered to be LOT patients, which is approximately 0.4 percent of the Navy beneficiary population. In comparison, the nationally reported numbers list approximately 2 million Americans as having abused or been dependent on prescription opioids—approximately 0.6 percent of the population.

NON-OPIOID PAIN MANAGEMENT

Question. Are there any efforts within military medicine to develop non-opioid pain management alternatives? If so, when are those alternatives most appropriate as replacement therapies?

Answer. Navy Medicine continues to develop and implement a biopsychosocial model for a more holistic approach to treating pain. We optimize medication management, complementary integrative medicine (CIM) strategies, and psychological interventions to address a patient's pain. Acupuncture, part of the Navy's Comprehensive Pain Management Program, has demonstrated particular benefit in the treatment of certain pain conditions, such as low back and neck pain. In addition, Naval Medical Center San Diego (NMCS D) conducted outcome studies of the Functional Restoration Pain Program (FRPP). FRPP is an intensive, interdisciplinary, medically supervised program, consisting of clinically structured healthcare over eight weeks, intended to restore service members back to their full readiness potential. This integrative approach provides optimized medication management, complementary integrative medicine strategies, and psychological interventions to specifically address patient's pain. This program is available to Active Duty Navy and Marine Corps service members who have been diagnosed with musculoskeletal-related pain lasting longer than 3 months and who have failed standard treatments. NMCS D is the first Navy Medicine Command to launch a FRPP and has developed the leading practices for other commands to adopt. As of March 2017, a total of thirteen cohorts have completed the FRPP course at NMCS D, with 85 percent of patients achieving a fit for full duty status upon successful graduation from the FRPP. We are also actively training personnel at NMCS D's Mind Body Medicine (MBM) Program—which integrates CIM into the overall healthcare delivery system and targets beneficiaries with chronic health conditions. This approach helps patients gain control over their stress, improve their resiliency, and optimize their mind and body for recovery. As of April 2017, 372 people have been trained in the MBM curriculum, and these practices have been applied at other military treatment facilities and deployed healthcare settings such as United States Ship (USS) Pearl Harbor, USS Essex, USS Nassau, and Wounded Warrior Battalion West.

OPIOID ABUSE EDUCATION

Question. How are you educating service members on the risks of opioid abuse? Are these mandatory for individuals receiving opiate prescriptions?

Answer. Navy Medicine issues each patient a printed patient education drug monograph. The monograph provides information on how to take the medication, the side effects caused by the medication, precautionary warnings, and guidance to seek medical help if needed. Additionally, the Military Health System continues to work with the Defense Veterans Center for Integrative Medicine (DVCIPM) on developing more patient information pamphlets and videos on various pain related information self-management techniques. In addition, Navy Medicine continues to focus significant effort on providing necessary clinical education and training support for pain management to providers. One of these efforts is focused on increasing the reach of pain specialists and expanding capacity for pain management services in primary care through use of the internationally recognized Extension for Community Healthcare Outcomes (ECHO) tele-mentoring model. Navy initiated ECHO tele-mentoring clinics in 2014. Analysis of patients' opioid prescriptions received 6 months before and 6 months after presentation of their case at ECHO reveals the average daily supply of prescriptions fell by 10 percent after being presented. Moreover, the total prescriptions written to patients following their presentation in ECHO fell by 30 percent. For individuals receiving opiate prescriptions, the Navy's Comprehensive Pain Management Program (NCPMP) assembled the Long-term Opioid Therapy Safety (LOTS) Working Group (WG) to review the 2010 Veteran Affairs/Department of Defense Clinical Practice Guidelines (VA/DoD CPG) for the Management of Opioid Therapy for Chronic Pain. The LOTS WG, which included family medicine, pharmacy, pain medicine, and other relevant specialties, assessed the CPGs identify and assess best practices for the safe prescription and use of opioid therapy for pain management. The outcome of this assessment was the selection of four key recommendations focused on: (1)Screening for past psychiatric history and substance use history for patients on LOT; (2)Screening for concurrent use of benzodiazepines; (3)Recommending the use and annual renewal of opioid care agreements; and, (4)Recommending the administration of annual urine drug screening for every patient on LOT. The LOTS WG completed a draft of a Navy Medicine Long-term Opioid Therapy Safety policy codifying the recommendations from the 2010 VA/DoD CPG and lessons learned from the CPG Compliance initiative. The

formal requirements for the management of patients on long-term opioid therapy, is expected to be released by the end of fiscal year 2017.

INFECTIOUS DISEASES

Question. Men and women in the military often find themselves in these hot zones where emerging infectious diseases are endemic. In the Asia Pacific, for example, malaria, dengue, TB, and other emerging infectious diseases pose a risk to our soldiers, sailors, airmen, and Marines in the region, whether they are stationed there or are supporting theatre security cooperation exercises. Continued research and prototyping is necessary as we continue to build medical defenses for our service members as they execute missions in at-risk environments—and this is not an endeavor the DHP should go alone. Invaluable relationships have formed with departments across the government like the CDC and HHS, and have brought to fruition incredible advances for our service members and citizenry alike. How important is bio-surveillance to protecting our troops from diseases when they are deployed?

Answer. Certain diseases can compromise mission execution by degrading mission readiness. Bio-surveillance is the critical first step to protecting our deployed troops from infectious diseases. Bio-surveillance comprises a critical element towards maintaining force health protection for deployed personnel subject to a broad spectrum of diseases, whether they occur naturally or are weaponized. An essential component of the Navy's ability to conduct bio-surveillance is the Forward Deployable Preventive Medicine Unit (FDPMU), a consolidated preventive medicine unit that conducts force health protection and collection across the conflict continuum in complex operational environments. The information collected by the FDPMU is used to assess population health risks associated with deployment related exposures and determine appropriate preventative measures such as prophylaxis and advising military clinicians. Long term value of bio-surveillance provides key input to the development of disease mitigation strategies such as vaccine development (strain selection for the annual influenza vaccine, development of malaria and dengue vaccines, etc.), monitoring of antibiotic resistance (multi-drug resistance TB, malaria drug resistance, resistant bacteria in wound infections), and the detection and response to emerging infectious diseases (ebola, MERS-CoV). The knowledge of current and emerging threats enables Combatant Commands to make pertinent and timely decisions regarding troop deployments into at risk areas. The DoD bio-surveillance program specifically focuses on warfighter-relevant threats. Areas where our troops are deployed such as SE Asia and Africa are hot spots for Emerging Infectious Diseases and we cannot rely on local governments or infrastructures to detect and report their prevalence. Therefore, in order to best protect our troops from known, novel, and newly emergent diseases as well as traditional and synthetic biological threat agents, it is necessary to continue to have state-of-the-art bio-surveillance detection techniques and forecasting methods.

PARTNERSHIPS WITH CDC AND HHS

Question. How do you work with partners like CDC and HHS to promote prevention and treatment through their international bio-surveillance programs? So would you say it puts more or less risk on your ability to protect our troops when these partner agencies have their budgets cut, jeopardizing their international bio-surveillance programs?

Answer. Partner agency budget reductions may not affect troop protection unless it was specific to funding international bio-surveillance programs. Historically, the CDC has provided the DoD with diagnostic laboratory components for novel strains of influenza and the Zika virus. The DoD utilizes CDC's clinical guidance to inform its force health protection policies such as CDC's Advisory Committee on Immunization Practices to military vaccine recommendations or CDC's Zika virus recommendations for DoD use. CDC funding cuts to these specific areas may compromise the ability to provide continued support. While the specific focus of the DoD bio-surveillance program is on the warfighter, the CDC and HHS programs provide the public health and medical intelligence perspectives that are integrated into the decisionmaking process for any engagement. We maintain a robust DoD bio-surveillance capability regardless of institutional partnerships, but a reduction in funding or a lapse in service of our partners at the CDC and HHS may have immediate impacts in terms of force health protection, non-combatant health engagement, and our ability to provide meaningful force depletion estimates that would lead to a significant degradation of DoD bio-surveillance capability. No single agency "owns" the bio-threat space, particularly with respect to international bio-surveillance programs. The DoD oversees labs and the CDC's embedded bio-surveillance activities world-wide, regularly share expertise, and cooperate on regional emergencies. DoD

and HHS have developed an interagency MOU to share health surveillance information, which has created a more comprehensive picture of global pandemic events while avoiding redundant surveillance efforts. The U.S. Navy conducts bio-surveillance programs in all the Geographical Combatant Commands in part due to the ability to build upon programs established by the CDC and HHS. These collaborative efforts with CDC and HHS partners occur at the Navy's overseas medical research commands greatly enhancing Navy's bio-surveillance reach. Due to the complimentary, but distinct bio-surveillance missions of Navy, CDC and HHS, the partners are able to leverage bio-surveillance efforts through these productive collaborations and complimentary strategic programs. Any reduction in the abilities of the CDC and HHS to support their international bio-surveillance programs will directly impact the amount and quality of medically-relevant information available to protect our troops. Just as we have experienced West Nile virus and now Zika spreading through the continental US, the world is experiencing rapid and dramatic changes of pathogen range. The international bio-surveillance programs are critical for this information to be kept up to date to protect our troops deployed world-wide. Loss of funding to CDC and HHS for international bio-surveillance programs may directly impact the U.S. Navy and DoD bio-surveillance efforts and downgrade the ability to generate timely data, putting our troops at risk from infectious disease threats.

PARTNERING WITH HHS

Question. I know DoD works closely with HHS to develop medical countermeasures, including the programs managed by the Biomedical Advanced Research and Development Authority—BARDA. You have been able to share costs and reduce redundancies. Will each of you elaborate more on DoD's partnership with HHS on developing medical countermeasures and discuss the potential impacts to DoD's efforts if HHS funding, including BARDA, is reduced?

Answer. The DoD and BARDA are interagency partners of the HHS-led Public Health Emergency Medical Countermeasures Enterprise (PHEMCE), which coordinates U.S. Government efforts on the development of medical countermeasures (MCM) to address the risks and consequences posed by chemical, biological, radiological, and nuclear (CBRN) agents as well as emerging infectious diseases. This interagency interaction involves coordination, collaboration, and leveraging of the outcomes from investments by both Departments in MCM research, development, and acquisition (RDA) activities. Reductions in funding to HHS agencies directly involved in MCM RDA activities (e.g., BARDA, National Institute of Allergy and Infectious Diseases, the Food and Drug Administration, and Centers for Disease Control and Prevention) may jeopardize national security and the DoD mission due to impacts on the MCM RDA pipeline and U.S. Government stockpiles, and may reduce private sector incentives to continue partnering with the U.S. Government to develop and sustain MCM. HHS through BARDA, the Division of Microbiology and Infectious Diseases at NIAID (DMID NIAID), and the Integrated Research Facility at NIAID (IRF NIAID) have provided crucial support to several Navy-DoD-NIAID-University and Industry collaborations to rapidly and economically develop medical countermeasures that threaten the Warfighter, DoD beneficiaries, and the U.S. civilian community at large. For example, Navy Medicine provided initial support to determine if transfusion of human plasma with high titer anti-influenza antibodies acquired from routine blood donors at the Red Cross or other non-profit blood bank centers could reduce mortality and morbidity of those with severe influenza. BARDA and NIAID, in collaboration with Naval Medical Research Center (NMRC) and industry, provided the financial and other resources that enabled a Phase II trial to demonstrate impressive safety and efficacy in a multi-center study conducted in the United States. BARDA, IRF and DMID NIAID, in collaboration with NMRC and industry, funded, produced and pre-clinically tested a medical countermeasure against Middle Eastern Respiratory Syndrome Coronavirus (MERS CoV) and then initiated a clinical trial at the NIAID clinical trial center. This countermeasure is the furthest in clinical development of any novel therapy for MERS CoV. Phase II clinical trials will require continued support from HHS and DoD. IRF and DMID NIAID, in collaboration with NMRC and industry, funded, produced and tested a medical countermeasure against Ebola in response to the outbreak in West Africa. This product was produced in less than 1 year and IRF NIAID demonstrated 100 percent efficacy in treating Non-human primates infected with Ebola. The NMRC Bone Marrow Research does extensive work with HHS Assistant Secretary for Preparedness and Response (ASPR) programs (BARDA and other ASPR radiation/nuclear units) and serves as a technical expert and radiation/nuclear program member. The Navy supports the National Marrow Donor Program (NMDP) to act as a medical counter-

measure for casualties of radiation exposure within the Radiation Injury Treatment Network (RITN) that would be activated during an IND detonation in an American.

MEDICAL COUNTERMEASURES

Question. DoD has been able to leverage HHS' medical countermeasures development by providing funding to HHS, including adding studies to an existing development program to address a DoD-specific need. This ensures that HHS's final medical countermeasure product can be used by DoD as well, saving the military time and money. Can you comment on this and discuss how a reduction in HHS funding could impact DoD's ability to address the CBRN [chemical, biological, radiological, and nuclear] threats that our military currently faces abroad?

Answer. The Office of Secretary of Defense (OSD) is the lead for the Chemical-Biological Defense Program (CBDP), which also includes medical countermeasures (MCMs) for radiological threats. The CBDP employs coordination, cooperation, and integration with industry and academia, interagency partners, and international defense departments as well as within the Department of Defense to ensure a prudent use of fiscal resources. The DoD leverages Health and Human Services (HHS) MCM research, development, and acquisition (RDA) activities to not only save time and money, but also to collaborate in meeting both civilian and DoD-specific CBRN defense needs. For example, DoD purchases several vaccine and therapeutics from the HHS Strategic National Stockpile (SNS) for vaccination and treatment of DoD forces. In addition, the DoD contributes resources and data to HHS development activities for DoD-specific needs (e.g., MCM development to address aerosol weapon-delivered filovirus infection, such as Ebola virus disease). Reductions in HHS MCM funding may reduce the opportunities for HHS and DoD MCM RDA activities if critical product research or development is delayed or cancelled. It may also reduce the ability of the DoD to obtain SNS MCM for both routine use or wartime contingency purposes.

QUESTIONS SUBMITTED TO LIEUTENANT GENERAL MARK A. EDIGER

QUESTION SUBMITTED BY SENATOR LINDSEY GRAHAM

TRANSFER OF OVERSIGHT AND MANAGEMENT OF MILITARY TREATMENT FACILITIES TO THE DEFENSE HEALTH AGENCY

Question. Section 702 of the fiscal year 2017 NDAA transferred oversight and management of military hospitals and clinics from the military services to the Defense Health Agency (DHA), and I understand that the Department is now developing courses of action for the Deputy Secretary to consider.—Will each of you assure me that you will facilitate a rapid and efficient transfer of the operations of those medical facilities to the DHA, and will each of you assure me that you will reduce the number of personnel in your headquarters and subordinate organizations to reflect the changing scope and size of your missions?

Answer. The Air Force, in concert with the Army, Navy, Joint Staff Surgeon and the Defense Health Agency (DHA) is developing a construct to ensure the transfer of medical care operations and facilities to the DHA. A significant element of this blueprint is to delineate, to the installation level, where medical services for patient care, medical care for readiness, and non-patient care readiness operations will occur. After fully comprehending the associated impacts of this alignment, the Services will be able to responsibly transfer medical care operations to DHA and reduce redundant headquarters functions without negatively affecting the Services' mission.

QUESTIONS SUBMITTED BY SENATOR JON TESTER

NATIONAL GUARD AND SUICIDE

Question. Montana is home to over 4,000 Guardsmen and reservists. There are currently referral resources available to Guardsmen on drill weekends, but no dedicated resources for ongoing care and support. Last summer, I wrote to Defense Secretary Carter about efforts being made by the Defense Suicide Prevention Office. My concern was that over 60 percent of Army Guard suicides were folks who had never deployed, and had limited access to mental healthcare. Unfortunately, DoD had the National Guard Bureau respond to the letter, which I think gets to the root of the problem. Issues like suicide prevention and mental care need to be monitored and coordinated at the highest level and across the services. They should not be dele-

gated. How are your respective services ensuring that your reserve and Guard components are able to tap into your collective mental and behavioral healthcare resources? Is DSPO tracking the amount of operation and maintenance funds required to fund behavioral health support programs for the reserve components as mandated in the fiscal year 2012 NDAA? When will the services implement a Program Element Code for suicide prevention?

Answer. The Air Force is fully committed to promoting resilience and preventing suicides across the total force and recognizes that access to support services and mental healthcare are an essential element of this effort. Both the Air Force Reserve Command and Air National Guard, collectively referred to as the Air Reserve component (ARC), provide mental health support to Airmen through their Directors of Psychological Health (DPH). These full-time mental health professionals are available to provide assessment and consultation to Airmen and families, regardless of duty status, while proactively establishing a robust referral network within their local community. ARC DPHs utilize their unique education, knowledge, training, and expertise to increase individual, unit, and wing readiness. DPHs also assist Airmen and their families in maximizing psychological health, resilience, and wellbeing to prevail over the unique challenges of the mission and maintain balance as they transition in and out of duty status. Per Air Force regulations, DPHs are credentialed and privileged by the nearest supporting military treatment facility to provide short term non-clinical counseling to address current issues and implement plans to manage and/or prevent emergencies. DPHs also establish referrals or linkages to longer-term care in the community, if needed. DPHs provide support via face-to-face and/or telephonic contact to meet the needs of their Airmen who perform reserve duties outside their local communities. This NDAA requirement falls under the Assistant Secretary of Defense for Health Affairs (ASD/HA) vs. the Defense Suicide Prevention Office (DSPO). The Air Force Reserve Command & Air National Guard budget for and monitor the expenditure of operations and maintenance (O&M) funds for behavioral health support programs and make this information available to ASD/HA upon request. Suicide prevention requirements are currently captured in their entirety under the mental health program in Program Element Code 87700. The Air Force Medical Service will continue to partner with the Defense Health Agency to determine if a specific Program Element Code for suicide prevention is necessary.

NATIONAL GUARD HEALTHCARE COVERAGE

Question. According to the 2014 Status of Forces Survey, 28 percent of National Guardsmen stated that they had no medical coverage. This would mean roughly 128,000 National Guardsmen do not have health insurance. Especially in rural areas with limited options, younger Guardsmen have a tough time with Tricare Reserve Select monthly premiums. I have also heard of problems with gaps in coverage when their families switch to Tricare Prime while activated. What can be done to make Tricare Reserve Select less expensive for younger Guardsmen and how can Tricare Prime limit gaps in coverage around activation?

Answer. TRICARE Reserve Select is a premium-based health plan available for purchase for qualified members of the Reserve Components and their family members. Monthly premiums paid by the Reserve Component member are calculated at 28 percent of the total government cost per 10 USC §1076d and determined on an appropriate actuarial basis. Sections 712 and 748 of the fiscal year 2017 National Defense Authorization Act require the Department of Defense to complete an assessment of the extent to which families of members of the Reserve components experience difficulties in transitioning to and from healthcare arrangements between Active Duty periods and to study options for improving their continuity of healthcare. These studies will provide the Department of Defense current information on the extent of the issue and how to move forward with improving continuity of healthcare for Reserve Component families.

TRICARE ISSUES

Question. Montana is home to a disproportionate number of military retirees. Many of them have adult children and call my office to ask why Tricare Young Adult is so expensive and has so many conditions. How can Tricare better provide for this population to bring it more in line with the same standard as ACA?

Answer. TRICARE Young Adult is similar to extended dependent coverage offered to non-military families by the Patient Protection and Affordable Care Act. The law requires the Department of Defense to charge qualified young adult dependents TRICARE Young Adult premiums that represent the full government cost of providing such coverage. The statute does not allow incremental premium increases

below the level needed to equal the cost of coverage on an appropriate actuarial basis.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

OPIOID EPIDEMIC

Question. The opioid epidemic is one that spans the entire country, with some of the most vulnerable populations being active service members and veteran's battling injuries sustained in our most recent wars. We owe it to the men and women who have already sacrificed so much to construct a viable plan to combat this epidemic. Each service must have a holistic understanding of opioid use—both prescriptive and illegal abuse—within their formations, and should apply progressive thought towards non-opioid pain management alternatives. What are you seeing with respect to the use of opioids across the force, and how does this compare to national trends?

Answer. Since 2012, there has been a 34 percent decrease in opioid prescriptions. In 2012, 217,897 opioid prescriptions were written for 103,495 Active Duty Air Force Service members. This represents 33.9 percent of the Active Duty Air Force population. In 2016, 143,446 opioid prescriptions were written for 77,732 Active Duty Service members, representing 24.7 percent of the Active Duty Air Force population. Air Force data was calculated based on one or more opioid prescriptions for an individual service member. As a comparison, in 2015, 39 percent of the national population over the age of 18 was prescribed opioids.

NON-OPIOID PAIN MANAGEMENT

Question. Are there any efforts within military medicine to develop non-opioid pain management alternatives? If so, when are those alternatives most appropriate as replacement therapies?

Answer. The Air Force is actively involved in providing integrative medicine that does not involve the use of opioids in our service members. Our five pain management clinics, including three integrative pain management centers, utilize a whole-person approach to treatment offering massage therapists, pain management psychologists, physical therapists, and yoga instruction. A variety of non-pharmacological modalities are utilized and tailored to the unique military medical environment. These modalities include cold laser therapy, osteopathic and/or chiropractic manipulation, and acupuncture. The Joint Base Andrews Acupuncture and Integrative Medicine Clinic is the flagship program for integrative medicine, executing many of these modalities, as well as testing new alternative therapies. Currently, 24 physicians have completed a 300-hour certification course in medical acupuncture. As of June 2017, 65 family medicine residents will have completed all or part of the medical acupuncture course. Since 2009, 1,124 providers have been trained in battlefield acupuncture, a minimally invasive technique used to treat acute and chronic pain. This technique has been widely utilized in both garrison and deployed locations, as well as in remote settings. Alternative therapies are now being implemented as part of a stepped-care approach to pain management. This approach may include alternative practices early on in the treatment plan or at any time when the patient and/or provider feels that conventional therapy has failed to achieve treatment goals.

OPIOID ABUSE EDUCATION

Question. How are you educating service members on the risks of opioid abuse? Are these mandatory for individuals receiving opiate prescriptions?

Answer. Our Air Force providers maintain the standard of care when prescribing medications in general, and in particular when prescribing opioids, which includes utilizing the following clinical guidelines: The Centers for Disease Control and Prevention (CDC) Guideline for Prescribing Opioids for Chronic Pain (March 2016) and the VA/DoD Clinical Practice Guideline for Opioid Therapy for Chronic Pain (February 2017). Non-opioid and non-pharmacological methods are discussed with the patient as first line therapies to treat acute pain. In the event an opioid is prescribed, the risks, benefits, and potential adverse effects are discussed with the patient at the time of the visit. The lowest possible dose is selected, not to exceed three to seven days duration. If an opioid is prescribed for chronic pain therapy (exceeding 3 months) the provider and patient will also discuss the long term goals aligned with the biopsychosocial model of pain. These goals consider not only the pain level experienced, but also the level of functioning the patient hopes to achieve. The patient will sign the Opioid Care Agreement (formerly known as a Pain Contract) found in the Tri-Service Workflow for Chronic Pain Management, the electronic

health record currently utilized by the Department of Defense Military Health System. A similar agreement will be found in the new electronic health record known as MHS GENESIS. The primary care provider serves as the sole provider responsible for prescribing the opioid and for re-assessing the patient at regular intervals, as well as tapering the opioid when indicated. This process is mandatory across the Air Force Medical Service. In addition, clinical pharmacists are being embedded in our primary care clinics to assist with patient education and counseling on proper use and disposal of medications. Twenty-six military treatment facilities (34 percent) currently have a full time clinical pharmacist providing direct support to the Air Force Medical Home.

INFECTIOUS DISEASES

Question. Men and women in the military often find themselves in these hot zones where emerging infectious diseases are endemic. In the Asia Pacific, for example, malaria, dengue, TB, and other emerging infectious diseases pose a risk to our soldiers, sailors, airmen, and Marines in the region, whether they are stationed there or are supporting theatre security cooperation exercises. Continued research and prototyping is necessary as we continue to build medical defenses for our service members as they execute missions in at-risk environments—and this is not an endeavor the DHP should go alone. Invaluable relationships have formed with departments across the government like the CDC and HHS, and have brought to fruition advances for our service members and citizenry alike. How important is bio-surveillance to protecting our troops from diseases when they are deployed?

Answer. Bio-surveillance plays a vital role in maintaining the health of U.S. service members. It provides potential early identification of known and emerging health threats, allowing for early response to protect our service members and support mission readiness.

PARTNERSHIPS WITH CDC AND HHS

Question. How do you work with partners like CDC and HHS to promote prevention and treatment through their international bio-surveillance programs? So would you say it puts more or less risk on your ability to protect our troops when these partner agencies have their budgets cut, jeopardizing their international bio-surveillance programs?

Answer. The Air Force has a direct link to the CDC via the Department of Defense liaison officer physically located at the CDC in Georgia. The Air Force also engages with other HHS agencies, such as the Office of the Assistant Secretary for Preparedness and Response (ASPR) and the Food and Drug Administration (FDA). Any realignment of resources would require a risk assessment by the Air Force to ensure continuation of force health protection measures.

PARTNERING WITH HHS

Question. I know DoD works closely with HHS to develop medical countermeasures, including the programs managed by the Biomedical Advanced Research and Development Authority—BARDA. You have been able to share costs and reduce redundancies. Will you elaborate more on DoD's partnership with HHS on developing medical countermeasures and discuss the potential impacts to DoD's efforts if HHS funding, including BARDA, is reduced?

Answer. The Air Force partners with HHS on medical countermeasures (MCM) development through multiple channels and a variety of levels, from the secretarial level down to the action officer level. The Department of Defense (DoD) and BARDA are interagency partners of the HHS-led Public Health Emergency Medical Countermeasures Enterprise (PHEMCE) established in 2006, which coordinates U.S. Government efforts on development of MCM to address the risks and consequences posed by chemical, biological, radiological, and nuclear agents as well as emerging infectious diseases. This interagency interaction involves coordination, collaboration, and reciprocal leveraging of the outcomes from investments by both Departments in MCM research, development, and acquisition (RDA) activities. The intent of HHS activities is to protect the health of the civilian population. Such activities may involve work on MCM that are or may be used by DoD for force health protection purposes and to better ensure readiness and operational effectiveness. Reductions in funding to BARDA and other elements of HHS directly involved in MCM RDA activities may jeopardize national security and the Air Force's ability to complete its DoD directed mission due to impacts on the MCM RDA pipeline and U.S. Government stockpiles, and would very likely reduce private sector incentives to continue partnering with the U.S. Government to develop and sustain MCM. Therefore, such reductions in funding may have the unintended consequence of posing risks to mili-

tary readiness and modernization efforts as described in the “Presidential Memorandum on Rebuilding the U.S. Armed Forces.”

MEDICAL COUNTERMEASURES

Question. DoD has been able to leverage HHS’ medical countermeasures development by providing funding to HHS, including adding studies to an existing development program to address a DoD-specific need. This ensures that HHS’s final medical countermeasure product can be used by DoD as well, saving the military time and money. Can you comment on this and discuss how a reduction in HHS funding could impact DoD’s ability to address the CBRN [chemical, biological, radiological, and nuclear] threats that our military currently faces abroad?

Answer. The Air Force leverages Department of Defense (DoD)/HHS medical countermeasure (MCM) research, development, and acquisition activities to save not only time and money, but also to collaborate in meeting both civilian and DoD-specific chemical, biological, radiological and nuclear defense needs. For example, DoD purchases anthrax vaccines and smallpox vaccines from the HHS Strategic National Stockpile (SNS) for vaccination of DoD forces at high-risk of exposure. In addition, the DoD adds studies to HHS development activities when these additional studies will address a DoD-specific need (e.g., MCM animal model development to address filovirus infection, such as Ebola virus disease). DoD also has a relationship with Biomedical Advanced Research and Development Authority (BARDA) to fulfill the requirement to “establish stockpiles of vaccine against H5N1 and other influenza subtypes determined to represent a pandemic threat...adequate to immunize approximately \$1.35 million persons for military use.” DoD has a support agreement with BARDA and uses their acquisition to purchase pandemic influenza vaccine, and once purchased, for the storage and stability testing of that bulk vaccine with the manufacturer. DoD coordinates with and considers recommendations from BARDA before making a purchase of vaccine, saving valuable time. Reductions in HHS MCM funding may reduce the opportunities for HHS and DoD MCM research, development, and acquisition activities if critical product research or development is delayed or cancelled. For example, if there was a reduction in funding, the ongoing work in relation to nerve agent antidotes, Zika vaccine, Ebola vaccine, Middle East Respiratory Syndrome Coronavirus, and Acute Radiation Syndrome may lead to unnecessary risk to our troops. It may also reduce the ability of the DoD to obtain SNS MCM for both routine use or wartime contingency purposes.

QUESTIONS SUBMITTED TO MS. STACY CUMMINGS

QUESTION SUBMITTED BY SENATOR THAD COCHRAN

ELECTRONIC HEALTH RECORD SYSTEM

Question. The Department of Defense awarded a \$4.3 billion contract for its new electronic health record system in July 2015. This new system was first deployed just last month. Is the electronic health record program still on track for full deployment across the military health system by 2022? What is being done to ensure the new electronic health record system will be interoperable with the Department of Veterans Affairs? How will this new electronic health record transform the delivery of healthcare by the Department of Defense?

Answer. MHS GENESIS was deployed to its first patient care site at Fairchild Air Force Base in Spokane, Washington in February 2017. Fielding at the next three sites in Washington State—Naval Hospital Oak Harbor, Naval Hospital Bremerton and Madigan Army Medical Center—will begin at the end of fiscal year 2017. Further deployments will occur by region—three in the continental U.S. and two overseas—in a total of 23 waves. This approach allows DoD to take full advantage of lessons learned and experience gained from prior waves to maximize efficiencies in subsequent waves, increasing the potential to reduce the deployment schedule in areas where it makes sense to do so. Full Operational Capability (FOC), to include garrison medical and dental facilities worldwide, is currently scheduled for 2022. While we are in the early stages of the fielding process, we do not anticipate any schedule changes at this time. The DoD and VA are two of the world’s largest healthcare providers, and today, they share more health data than any other two major health systems. In April 2016, DoD and VA certified to Congress that they are fully interoperable, in accordance with the fiscal year 2014 National Defense Authorization Act (NDAA). While the Departments met the required objectives, interoperability is a spectrum wherein data sharing and functionality can continually improve. As a result, we continue to expand interoperability beyond last April’s DoD/

VA Joint Certification of Interoperability. MHS GENESIS's modern capabilities will allow DoD to share more complete data with similarly equipped Federal and private sector partners while simultaneously increasing the number of DoD data sharing partners by the thousands. A modern EHR incorporates advanced tools and capability improvements that promote efficiencies, provide a higher quality of care, and improve population health outcomes. The suite of tools available through MHS GENESIS include robust data reporting and tracking capabilities, improved analytics, drug-to-drug interaction alerts, and a user-friendly patient portal. MHS GENESIS puts more integrated information at the healthcare professional's fingertips for rapid decisionmaking, reducing duplication of data collection and procedures, such as ordering unnecessary labs or duplicate prescriptions. At Fairchild AFB, we have already seen evidence that the increased patient data, health alerts and tools to cross reference medical guidance has led MHS GENESIS clinicians to make changes to their behavior. More information in the patient's record will continue to yield better guidance for providers to make more informed patient decisions.

QUESTION SUBMITTED BY SENATOR BRIAN SCHATZ

JOINT INFORMATION TECHNOLOGY CENTER

Question. The Pacific Joint Information Technology Center, or JITC, on Maui has a long record of rapidly delivering medical solutions to the warfighter in the Pacific, supporting PACOM and its components. The JITC also has untapped potential to support DoD's work to improve the interoperability of its electronic health record with the VA. The Pacific JITC actually created the Joint Legacy Viewer that has allowed the DoD and VA to share read-only electronic health records. However, budget constraints have forced the Defense Health Agency to ramp down funding for the center by the end of this fiscal year. Given Secretary Mattis' commitment to restoring military readiness, is it still wise to stand down the center—especially in light of the JITC's demonstrated promise to support DoD's work toward a full interoperable electronic health record with the VA?

Answer. This topic is outside of the Defense Health Management Systems' portfolio and has been addressed by the office of the Undersecretary of Defense for Personnel and Readiness: The Pacific Joint Information Technology Center has had a long record of rapidly delivering medical solutions to the DoD. However, the DoD plans to close Pacific JITC, effective 30 September 2017. The decision to close Pacific JITC was based on the Department's larger comprehensive Zero-based Budget Review (ZBR) which was conducted by the DoD Chief Information Officer, the Office of Cost Assessment and Program Evaluation, and Military Health System (MHS) information technology leaders and analysts, and signed by the Deputy Secretary of Defense. Through the ZBR, Pacific JITC was determined as not essential to meet future MHS testing and interoperability needs. The Department remains committed to MHS research in the areas of joint service and joint DoD/VA concept technology development, prototyping, and piloting of products and services to support medical readiness requirements and information technology modernization needs.

SUBCOMMITTEE RECESS

Senator COCHRAN. The Defense Subcommittee will reconvene on Wednesday, April 5, at 10:30 a.m., and at that time, we will receive testimony from the intelligence community.

Until then, this subcommittee stands in recess.

[Whereupon, at 11:59 a.m., Wednesday, March 29, the subcommittee was recessed, to reconvene at 10:30 a.m., Wednesday, April 5.]