STATEMENT BY

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INTRODUCTION

Chairman Shelby, 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 record (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 give beneficiaries more control over their healthcare experience.

Our mission aligns with Secretary Mattis' National Defense Strategy (NDS) to modernize the Department of Defense and provide combat-credible military forces. The threats facing our nation constantly evolve and a medically ready military force is critical to our national defense. MHS GENESIS advances that mission. This cutting edge technology will supply MHS providers with the necessary data to collaborate and make the best possible healthcare decisions for our service members to remain mission ready and mission focused; contributing to the NDS strategic approach to restore warfighting readiness and field a lethal force.

The DoD was an early pioneer in the development of a centralized, global electronic health record when it introduced AHLTA in 2004. At the time, the DoD's in-house EHR solution was viewed by private sector enterprises as the future. However, over the last decade the private sector has made significant advances in technology. As result, in 2013 the DoD made the decision to transition from multiple 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.

In July 2015, the DoD awarded a $4.3 billion contract to the Leidos Inc. to deliver a modern, secure, and connected EHR. The Leidos Partnership for Defense Health (LPDH) team consists of four core partners, Leidos Inc., as the prime integrator, 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 Dentrix Enterprise, a best of breed dental module.

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 year by deploying to all four Initial Operational Capability (IOC) sites, culminating with deployment to Madigan Army Medical Center (MAMC), the largest of the IOC sites, in Tacoma, Washington. This massive effort took the coordination, guidance, and support of multiple DoD agencies and organizations. I'd like to acknowledge all those involved in IOC including Mr. Thomas McCaffery, acting assistant secretary of defense for Health Affairs; Navy Vice Admiral Raquel Bono, director, Defense Health Agency (DHA); Air Force Colonel Michaelle Guerrero, 92nd Medical Group, Fairchild Air Force Base; Navy Captain Christine Sears, commanding officer, Naval Health Clinic Oak Harbor; Navy Captain. Jeffrey Bitterman, commanding officer, Naval Hospital Bremerton; and Army Colonel. Michael Place, commander, MAMC for their tremendous work to make the IOC in the Pacific Northwest a success. I would also like to thank our great team of professionals at PEO DHMS for acquisition and program excellence as well as the functional representatives across the Military Health System who were involved since day one in setting the strategy for modernization.

GO-LIVE SUCCESS, OPTIMIZATION, BASELINE CONFIGURATION AND COMMON
DEPLOYMENT STRATEGY (STABILIZATION AND ADOPTION)

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 DHA to ensure the clinical workflows enabled by MHS GENESIS are standard and
consistent across the enterprise to minimize variation in the delivery of healthcare.
Representatives from the functional community also collaborated to identify critical data to pull
from legacy systems into MHS GENESIS: Problems, Allergies, Medications, Procedures, and
Immunizations (PAMPI). Other data, including lab results, radiology results, discrete notes,
discharge summaries, etc., is still available through the Joint Legacy Viewer (JLV) as we sunset
legacy systems.

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 possible solution 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 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 optimize the delivery of MHS GENESIS. Rollout across the MHS follows a "wave" model. Initial fielding sites in the Pacific Northwest were the first wave of military treatment facilities (MTFs) to receive MHS GENESIS, which began February 2017 at Fairchild AFB, just 19 months after contract award, and officially concluded in January at MAMC. By deploying to four 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 decision to continue MHS GENESIS deployments later this year. 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 will last approximately one year. Regionally grouped waves, such as the Pacific Northwest, 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 necessary. Full Operational Capability (FOC), to include garrison medical and dental facilities worldwide, is scheduled for 2022.

As with any large scale IT transformation, there are training, user adoption, and change management opportunities. The configuration of MHS GENESIS deployed for IOC provided a minimally suitable starting point to assess the system as well as the infrastructure prior to full deployment. Now that DoD has the results from each service operating MHS GENESIS in a representative cross section of military hospitals and clinics, DoD can make adjustments to software, training, and workflows and be confident the changes are positive and impactful throughout the MHS.

Our immediate focus is to gain approval to continue to deploy MHS GENESIS in 2019. This acquisition decision requires an MHS GENESIS baseline software configuration and a

repeatable agile deployment strategy to support program deployments beyond the Pacific Northwest. To that end, we are working with our industry partner, LPDH, to engage representatives from the sites, the functional community, the technical community, and the test community with the goal to validate the MHS GENESIS baseline software configuration based on IOC lessons learned through an independent operational test at Madigan this year.

For an eight-week period starting mid-January, we sent representatives from PEO DHMS, LPDH, and DHA to collaborate with initial fielding site users with a focus on MHS GENESIS configuration as well as training, adoption of workflows, and change management activities. Specific areas of refinement included: roles, clinical content, trouble ticket resolution, and workflow adoption. Following this period, we collected feedback, evaluated, and provided enhancements to the system. These activities were always part of our IOC process, and we are experiencing measurable results. End user feedback is positive. Our approach has and always will be functionally led and frontline informed.

MEASURING USER ADOPTION OF MHS GENESIS

Recognizing the sizeable investment in an EHR for its 9.4 million beneficiaries and more than 200,000 providers, the DoD needed a way to independently measure the progress and effectiveness of MHS GENESIS adoption. To that end, the DoD engaged the Healthcare Information and Management Systems Society (HIMSS) Analytics to assess adoption and conduct IOC usability assessments for MHS GENESIS. HIMSS provided adoption scoring and benchmarking gap analysis assessments on IOC sites to rate the top HIMSS usability principles including the Electronic Medical Record Adoption Model (EMRAM) and the Outpatient-Electronic Medical Record Adoption Model (O-EMRAM). The HIMSS Analytics EMRAM is widely recognized as the industry standard for measuring EHR adoption and rated from Stage 0 to Stage 7. The clinic at Fairchild Air Force Base was scored only on the O-EMRAM as an outpatient facility.

Prior to MHS GENESIS deployment, the average score was below a Stage 2 EMRAM and slightly above Stage 2 O-EMRAM. Post deployment, the sites scored at or above a Stage 5 on

the EMRAM and O-EMRAM, with Fairchild Air Force Base achieving an O-EMRAM Stage 6. These scores are well above the national averages of Stage 2 and Stage 3 respectively. It is important to note, Stage 6 obtained by Fairchild is an indicator that an organization is effectively leveraging the functionality of its EHR. Stage 6 is an accomplishment only 20 percent of ambulatory providers have attained. To achieve this level, the facility was required to demonstrate a number of technology functionalities that contribute to patient safety and care efficiency, including establishing a digital medication reconciliation process, a problem list for physicians, and the ability to send patient preventative care reminders.

DEPARTMENT OF DEFENSE AND OTHER AGENCY COLLABORATION

In June 2017, former VA Secretary Shulkin announced his decision to adopt the same EHR as the DoD. To facilitate that decision, he signed a "Determination and Findings" that allows the VA to issue a solicitation directly to Cerner Corporation for the acquisition of the EHR currently being deployed by DoD, for deployment and transition across the VA enterprise in a manner that meets VA needs and enables seamless healthcare to veterans and qualified beneficiaries.

This decision is the next step toward advancing EHR adoption across the nation and is in the best interest of our veterans. The VA's adoption of the DoD's EHR will fundamentally solve the problem of transitioning patient health record data between the Departments by eliminating the need for moving data altogether. The VA also is adopting DoD workflows to the greatest extent possible, while adding some necessary VA-specific tasks. The VA and DoD are committed to partnering in this effort and understand that the mutual success of this venture is dependent on the close coordination and communication between the two Departments which continues to be supported by the DoD/VA Interagency Program Office.

The DoD continues to support the VA's ongoing EHR modernization efforts. During Fiscal Year 2018, the DoD and VA collaborated to provide updates on the Departments' modernization efforts, technical challenges, and joint capabilities. The DoD also supported joint collaboration meetings between DoD and VA Chief Information Officers (CIO) and other senior leadership to facilitate other future activities relating to a single integrated EHR. As a result of these meetings,

leadership established a DoD-VA CIO Executive Steering Committee as well as working groups focused on identity management, joint architecture, and cybersecurity. As the VA seeks to finalize a contract for their own COTS, it is critical for the DoD and VA to work together. This is the next logical step to support the congressional mandate for greater DoD and VA integration.

In April 2018, the DoD announced a partnership with the United States Coast Guard for MHS GENESIS. The Coast Guard will adopt and deploy MHS GENESIS to its clinics and sick bays. Approximately 6,000 active duty Coast Guard members receive care in DoD hospitals and clinics. A complete and accurate health record in a single common system is critical to providing high-quality, integrated care and benefits, and to improving patient safety. MHS GENESIS will supply Coast Guard providers with the necessary data to collaborate and deliver the best possible healthcare.

INTEROPERABILITY AND DATA SHARING

As the DoD transitions to MHS GENESIS, our commitment to expand 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. More than 60 percent of active duty and beneficiary healthcare is provided outside an MTF, through TRICARE network providers. Healthcare providers need up-to-date and comprehensive healthcare information to facilitate informed decision making 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 January 2017, DoD and VA certified to Congress that they are fully interoperable, in accordance with the FY2014 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 the DoD/VA Joint Certification of Interoperability.

The modern capabilities of MHS GENESIS 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 aggregates data from across multiple data sources, to include MHS GENESIS, to provide read access to medical information across multiple government and commercial data sources. Since March 2017, the last time I updated the committee, patient data accessed through JLV increased more than fivefold; including over 1 million patient records viewed between the DoD and VA combined.

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 still available to DoD providers in AHLTA and is now incorporated into MHS GENESIS.

Over the past five 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 decision-making by delivering a comprehensive picture of patient health. Expanding these partnerships will enable medical providers to move from a reliance on paper records and into a modern era with increased, current health data available anytime, anywhere. In March 2017, there were over 20 Health Information Exchange (HIE) partners. Today, the number is more than doubled as the DoD has nearly 50 HIE partners. DoD leverages its partnership with the Sequoia Project, a network of exchange partners who securely share clinical information across the United States. We are also targeting CommonWell—an independent, not-for-profit trade association with connections to more than 5,000 private sector healthcare sites as a partner. Leveraging this connection through MHS GENESIS will expand the great work DoD accomplished through HIEs. As DoD and VA continue to improve data sharing between the

Departments and with the private sector, deployment of MHS GENESIS will enable more advanced data sharing capabilities through the existing architecture. Securely sharing health data is a critical piece of the mission delivered today.

OPERATIONAL MEDICINE

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, 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 Systems 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 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.

Leveraging agile development practices, PEO DHMS will continue to modernize support to operational medical providers across the continuum of care, from point of injury to the military treatment facility.

CONCLUSION

Thank you again for the opportunity to come here today and share the progress we've made to transform the delivery of healthcare for service members, veterans, and their families. The successful deployment of MHS GENESIS to our four IOC sites was an important milestone 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.

Research in 2017 from KLAS identifies leadership engagement, education, and good governance as factors that contribute to the success of an EHR implementation. Leadership from the DoD is heavily engaged and invested in the success of MHS GENESIS, and we continually take lessons learned from training, adoption of workflows, and change management activities. While we are well on our way, PEO DHMS continues to progress as an organization accepting nothing less than outstanding results and acquisition excellence. We are agile and iterative in our approach and are committed to identifying the right capabilities and delivering those capabilities to our customers. As a partner in our progress, we appreciate the Congress's 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.