

VA AND DOD IT: ELECTRONIC HEALTH RECORDS INTEROPERABILITY

JOINT HEARING
BEFORE THE
SUBCOMMITTEE ON
INFORMATION TECHNOLOGY
OF THE
COMMITTEE ON OVERSIGHT
AND GOVERNMENT REFORM
AND THE
SUBCOMMITTEE ON OVERSIGHT AND
INVESTIGATIONS
OF THE
COMMITTEE ON VETERANS' AFFAIRS
HOUSE OF REPRESENTATIVES
ONE HUNDRED FOURTEENTH CONGRESS
FIRST SESSION

OCTOBER 27, 2015

Serial No. 114-147

Printed for the use of the Committee on Oversight and Government Reform



Available via the World Wide Web: <http://www.fdsys.gov>
<http://www.house.gov/reform>

U.S. GOVERNMENT PUBLISHING OFFICE

25-915 PDF

WASHINGTON : 2017

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

JASON CHAFFETZ, Utah, *Chairman*

JOHN L. MICA, Florida	ELIJAH E. CUMMINGS, Maryland, <i>Ranking</i>
MICHAEL R. TURNER, Ohio	<i>Minority Member</i>
JOHN J. DUNCAN, JR., Tennessee	CAROLYN B. MALONEY, New York
JIM JORDAN, Ohio	ELEANOR HOLMES NORTON, District of
TIM WALBERG, Michigan	Columbia
JUSTIN AMASH, Michigan	WM. LACY CLAY, Missouri
PAUL A. GOSAR, Arizona	STEPHEN F. LYNCH, Massachusetts
SCOTT DESJARLAIS, Tennessee	JIM COOPER, Tennessee
TREY GOWDY, South Carolina	GERALD E. CONNOLLY, Virginia
BLAKE FARENTHOLD, Texas	MATT CARTWRIGHT, Pennsylvania
CYNTHIA M. LUMMIS, Wyoming	TAMMY DUCKWORTH, Illinois
THOMAS MASSIE, Kentucky	ROBIN L. KELLY, Illinois
MARK MEADOWS, North Carolina	BRENDA L. LAWRENCE, Michigan
RON DESANTIS, Florida	TED LIEU, California
MICK MULVANEY, South Carolina	BONNIE WATSON COLEMAN, New Jersey
KEN BUCK, Colorado	STACEY E. PLASKETT, Virgin Islands
MARK WALKER, North Carolina	MARK DESAULNIER, California
ROD BLUM, Iowa	BRENDAN F. BOYLE, Pennsylvania
JODY B. HICE, Georgia	PETER WELCH, Vermont
STEVE RUSSELL, Oklahoma	MICHELLE LUJAN GRISHAM, New Mexico
EARL L. "BUDDY" CARTER, Georgia	
GLENN GROTHMAN, Wisconsin	
WILL HURD, Texas	
GARY J. PALMER, Alabama	

SEAN McLAUGHLIN, *Staff Director*

TROY STOCK, *Subcommittee on Information Technology Staff Director*

DAVID RAPALLO, *Minority Staff Director*

SARAH VANCE, *Clerk*

SUBCOMMITTEE ON INFORMATION TECHNOLOGY

WILL HURD, Texas, *Chairman*

BLAKE FARENTHOLD, Texas, <i>Vice Chair</i>	ROBIN L. KELLY, Illinois, <i>Ranking Member</i>
MARK WALKER, North Carolina	GERALD E. CONNOLLY, Virginia
ROD BLUM, Iowa	TAMMY DUCKWORTH, Illinois
PAUL A. GOSAR, Arizona	TED LIEU, California

COMMITTEE ON VETERANS' AFFAIRS

JEFF MILLER, Florida, *Chairman*

DOUG LAMBORN, Colorado	CORRINE BROWN, Florida, <i>Ranking</i>
GUS M. BILIRAKIS, Florida, <i>Vice-Chairman</i>	<i>Minority Member</i>
DAVID P. ROE, Tennessee	MARK TAKANO, California
DAN BENISHEK, Michigan	JULIA BROWNLEY, California
TIM HUELSKAMP, Kansas	DINA TITUS, Nevada
MIKE COFFMAN, Colorado	RAUL RUIZ, California
BRAD R. WENSTRUP, Ohio	ANN M. KUSTER, New Hampshire
JACKIE WALORSKI, Indiana	BETO O'ROURKE, Texas
RALPH ABRAHAM, Louisiana	KATHLEEN RICE, New York
LEE ZELDIN, New York	TIMOTHY J. WALZ, Minnesota
RYAN COSTELLO, Pennsylvania	JERRY MCKNERNEY, CALIFORNIA
AMATA COLEMAN RADEWAGEN, American Samoa	
MIKE BOST, Illinois	

JON TOWERS, *Majority Staff Director*

ERIC HANNEL, *Subcommittee on Oversight and Investigations Staff Director*

JESSICA EGGIMANN, *Chief Clerk*

DON PHILLIPS, *Minority Staff Director*

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

MIKE COFFMAN, Colorado, *Chairman*

DOUG LAMBORN, Colorado	ANN M. KUSTER, New Hampshire, <i>Ranking</i>
DAVID P. ROE, Tennessee	<i>Member</i>
DAN BENISHEK, Michigan	BETO O'ROURKE, Texas
TIM HUELSKAMP, Kansas	KATHLEEN RICE, New York
JACKIE WALORSKI, Indiana	TIMOTHY J. WALZ, Minnesota

CONTENTS

Hearing held on October 27, 2015	Page 1
--	-----------

WITNESSES

The Hon. Laverne Council, Assistant Secretary for Information Technology, Chief Information Officer, U.S. Department of Veterans Affairs	
Oral Statement	7
Written Statement	9
Mr. Brian P. Burns, Deputy Director, Warfighter Systems Integration, Office of Information Dominance, U.S. Department of Veterans Affairs	
Mr. Christopher A. Miller, Program Executive Officer, Defense Healthcare Management Systems, U.S. Department of Defense	
Oral Statement	20
Written Statement	22
Mr. David Devries, Principal Deputy Chief Information Officer, U.S. Depart- ment of Defense	
Oral Statement	30
Written Statement	32
Ms. Valerie C. Melvin, Director of Information Management and Technology Resources Issues, U.S. Government Accountability Office	
Oral Statement	40
Written Statement	42

APPENDIX

Congressman Gerald E. Connolly Opening Statement	96
Questions for the Record for the Hon. LaVerne Council, submitted by Chair- man Hurd	99
Questions for the Record for Mr. Christopher Miller, Submitted by Chairman Hurd	103

VA AND DOD IT: ELECTRONIC HEALTH RECORDS INTEROPERABILITY

Tuesday, October 27, 2015

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON INFORMATION TECHNOLOGY,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
JOINT WITH THE SUBCOMMITTEE ON OVERSIGHT AND
INVESTIGATIONS, COMMITTEE ON VETERANS' AFFAIRS
Washington, D.C.

The subcommittees met, pursuant to call, at 2:50 p.m., in Room 2154, Rayburn House Office Building, Hon. Will Hurd [chairman of the Subcommittee on Information Technology, Committee on Oversight and Government Reform] presiding.

Present from the Committee on Oversight and Government Reform: Representatives Hurd, Farenthold, Walker, Blum, Kelly, Connolly, Duckworth, Lieu, and Moulton.

Present from the Committee on Veterans' Affairs: Representatives Coffman, Lamborn, Roe, Benishek, Huelskamp, Walorski, Kuster, O'Rourke, and Walz.

Mr. HURD. The Subcommittee on Information Technology of the Committee on Oversight and Government Reform and the Subcommittee on Oversight and Investigations of the Committee on Veterans' Affairs will come to order.

Without objection, the chair is authorized to declare a recess at any time.

Let me start today's hearing by trying to simply state my frustration. It's the year 2015. We live in a complex interconnected society with self-driving cars, wearable technology, and complex algorithms that can predict when a critical mechanical component is going to break, but our soldiers, sailors, airmen, and marines who are making the transition from DOD to VA healthcare are literally told to print out hard copies of their medical records and then walk them to the VA.

We have sent men to the moon and robots to Mars. I feel like we should be able to move one electronic file no matter how big, no matter how old, from one computer system to another. I don't mean to understate the enormity of the challenge of integrating the two largest Federal bureaucracies, but it's clear to me that our inability to integrate these two systems is a problem of leadership rather than technical feasibility.

The story of the interoperable electronic health record starts in 1998 with the government computer-based patient record initiative. Since then, I've counted six programs or other initiatives from 2002

to 2013 designed to increase the exchange of healthcare data between the VA and the DOD.

In that time, we've had three Presidents and two wars, and the members of our Armed Forces are still coming home to find that two decades was not long enough for these two Departments to get together and develop a workable and fully interoperable electronic health record.

While today's hearing could include a conversation laced with technical terminology, interoperability, mapping national data standards, graphical user interfaces, and health data domains, at its core, this is not a problem of technology. This is an issue of management.

Why do these two departments abandon the integrated health record program? Cost-effectiveness was the answer given after spending, according to the Interagency Program Office, \$564 million on the integrated health record. But continual failures to make deadlines and deliver on capabilities led to these two Departments doing what they so often have done in the past: go their separate ways.

The current plan for DOD and the VA to modernize their healthcare IT infrastructure in order to achieve full interoperability lacks metrics and goals. These are not issues of data standardization. This is management 101. In fiscal year 2014, the Department of Veterans Affairs spent 3.2 billion on outdated legacy technology while Department of Defense spent 24.3 billion.

Over the summer, DOD awarded a \$4.3 billion contract award to upgrade DOD's DHMSM program, which is DOD's program to modernize its health IT systems. But what concerns me are the statements by Mr. Frank Kendall, the Under Secretary of Defense for Acquisition, Technology, and Logistics, who downplayed the role of DHMSM in interoperability. Mr. Kendall made these two comments about DHMSM, "It's a big misconception out there that this software system we're buying is about interoperability, period. There is not a big interoperability problem with the VA and DOD today."

This is the problem I keep coming back to. Does management understand the depth of the problem when it comes to interoperability? Let me say this right now, just to get it out of the way. The Joint Legacy Viewer, the JLV, is not real interoperability, and I hope that is not any one of you all's answers today to any of our questions about interoperability. The ability to view patient data and the ability to access and use in realtime patient data are two profoundly different things. Missed deadlines, cost overruns, and failures to deliver on expectations leave me with a series of doubts about these two Departments' ability to work towards this common goal.

When can DOD and the VA actually implement their planned IT improvements? When can DOD and the VA modernize their systems? When can DOD and the VA achieve full interoperability? I am looking forward to exploring these topics today.

My colleagues and I recognize these are big challenges. Interoperability of health records is something the private sector is still struggling with, but if DOD and the VA get it right, they can be a model for the rest of the world. At the end of the day, when we

cut through all the technical jargon, the myriad of acronyms and the countless PowerPoints on this topic, we have two very simple questions that must be answered: When will our men and women in uniform be able to walk across the street the day they are discharged from service to a VA medical facility and have their health record waiting for them, and who is in charge of making this happen?

It's now my pleasure to recognize the ranking member of the Subcommittee on Information Technology, Ms. Kelly from Illinois, for her opening statement.

Ms. KELLY. Thank you, Mr. Chairman.

According to the American Hospital Association, only 23 percent of all hospitals are equipped with the technology that would allow them to find, send, receive, and use electronic health records. The ability of different healthcare providers to share and use electronic health information with one another, regardless of their location, is often referred to as interoperability. The American Hospital Association's findings made clear that achieving the full interoperability of electronic health records among different healthcare providers is a challenge the entire healthcare industry is struggling to meet.

Nowhere is this challenge more prevalent, as my chairperson said, than with the Department of Defense and the Department of Veterans Affairs, operators of two of the Nation's largest healthcare systems. For our military personnel and veterans, the interoperability of electronic health records is crucial for ensuring they receive the best medical care.

While on Active Duty and later on as veterans, many DOD and VA personnel tend to be highly mobile and are more likely to have health records residing at multiple medical facilities within and outside of the United States. For several years now, the VA and the DOD have been working to achieve interoperability. Both report that so far, as interoperability concerns, the exchange and use of electronic health records between their two systems, this goal has been achieved.

However, as GAO's August report on the status of interoperability at both the VA and the DOD makes clear, both Departments are still years away from achieving full interoperability so that the electronic health records can be exchanged and used not just between their two systems but with any private medical provider in the country.

GAO recommended that VA and DOD promptly develop outcome-oriented metrics and goals for defining and measuring their progress on achieving full interoperability. As GAO noted in its report, and I quote, "using an effective outcome-based metric approach could provide DOD and VA a more accurate ongoing picture of their progress toward achieving interoperability and the value and benefits generated."

I look forward to hearing in more detail from today's witnesses on their plans for ensuring that the VA and DOD have in place a fully modernized interoperable electronic health records system.

Today's hearing also raises valid cybersecurity concerns with respect to what each Department is doing to ensure that medical records stored on their networks are adequately protected from hackers. As we've learned from this year's cyber attacks against

leading health insurers, like Anthem and Premiera or Blue Cross, hackers are now targeting medical records in an effort to obtain highly sensitive information about individuals.

As the operators of two of the Nation's largest healthcare systems, it is critical that DOD and the VA invest in and deploy the most advanced cybersecurity tools to safeguard the sensitive medical information that is stored on their networks.

Thank you, Mr. Chair, for the hearing, and I yield the balance of my time.

Mr. HURD. Thank you, Ms. Kelly. I now welcome and recognize the chairman of the Subcommittee on Oversight and Investigations, the Committee on Veterans' Affairs, Mr. Coffman from Colorado, who has been showing leadership on supporting our veterans for many years.

I welcome you for your opening statement, sir.

Mr. COFFMAN. Thank you, Chairman Hurd.

I would like to welcome everyone to today's joint hearing to address ongoing issues with the electronic health records or EHR's of the Department of Defense and Veterans Affairs. VA and DOD have been attempting to harmonize their EHRs for decades, leading to an erratic history where billions of dollars have been expended to reach that goal.

Initially, they sought to make their systems interoperable, the plan being that they could keep their separate systems but make them able to seamlessly transmit critical data. Later, the agencies abandoned that idea and decided that it would be better to create a new, integrated system that would be shared by both agencies.

In a February 2014 report, GAO found that the VA and DOD Interagency Program Office charged with overseeing these efforts estimated the cost of this integrated system would be \$29 billion from fiscal year 2013 through fiscal year 2029. Notably, this figure does not include the pre-2013 attempts by the agency to join their health records dating back to at least 1998.

Yet, again, the decision was made to switch course, this time abandoning the efforts to create an integrated system after spending at least \$564 million on it and resuming pursuit of separate systems that would ideally achieve full interoperability.

There have been numerous subcommittee investigations, hearings, and GAO reports highlighting the extreme dysfunction occurring in this process. The National Defense Authorization Acts for fiscal year 2008 and 2014 were explicit in their requirements for VA and DOD to jointly develop fully interoperable EHR systems as well as to ensure that all healthcare data contained in both agencies' systems complied with national standards and were computable in realtime.

Both agencies have failed to meet this legal requirement by missing the October 1, 2014 deadline. To do so, and GAO has found that full interoperability will not occur before 2018. Additionally, the Centers for Medicare and Medicaid Services developed criteria to incentivize meaningful use of certified EHRs in order to help promote health data interoperability. In the private sector, the path toward compliance and certification with those criteria is generally done using commercial off-the-shelf software.

Use of successfully deployed off-the-shelf software lowers risk of project failure, reduces time to get to the desired capability, and, generally speaking, costs less at implementation and sustainment, none of which appeared to matter to VA. Instead, VA opted to create a proprietary system which many of its healthcare facilities across the country have further customized, leading to 130 different electronic healthcare systems.

Unfortunately, this sort of disarray and failure to produce positive results has become the hallmark of VA's Office of Information and Technology. There has been a substantial personnel change in that office, which is encouraging, but there is a tremendous amount of damage that must be undone before these agencies' EHRs can meaningfully interact.

The National Defense Authorization Act—I look forward to hearing from the witnesses today about the rationale for the decisions that have been made as well as the plans to correct decades of information security weaknesses within both Departments.

With that, I yield back to Chairman Hurd.

Mr. HURD. Thank you, Chairman Coffman.

I now recognize the ranking member of the Subcommittee on Oversight and Investigations, Ms. Kuster, for an opening statement.

Ms. KUSTER. Thank you, Chairman Hurd, Chairman Coffman, and Ranking Member Kelly for holding this hearing on issues with DOD and VA electronic health records. Both agencies have been working for almost 20 years to achieve true interoperability for their health records, and one of my very first hearings at the VA committee was on this topic. The goal of real interoperability and the seamless sharing of health information has seemed in reach, but unfortunately, never quite achieved.

In an August 2015 GAO report, GAO noted that both agencies had failed the October 2014 deadline imposed by the 2014 National Defense Authorization Act, as referenced by my chair, to certify that all healthcare data complies with national data standards and is computable in realtime. DOD and VA now report that they may be, quote, "weeks away" from meeting this deadline a full year later, but it is still unclear whether VA and DOD will achieve interoperability between their electronic health records by the end of 2016.

This raises what I believe to be the heart of this decade-long effort and why the achievement of this goal always seems to be just out of reach. What, in practical terms, does interoperability mean to DOD, VA, and private providers? GAO refers to this as, quote, "the criticality of these Departments needing to define what they aim to accomplish through these efforts and identify meaningful outcome-oriented goals and metrics that indicate not only the extent to which progress is being made toward achieving full interoperability but also the measures to which they will be held accountable."

If we are not clear as to what we all mean by interoperability and what we're hoping to achieve in the case of an individual veteran or servicemember in the healthcare they receive, then we will never achieve what we need to and interoperability will only be in the eye of the beholder. The search for real interoperability goes

beyond DOD and VA and raises questions as to our expectations regarding how healthcare data flows between agencies, and now with the VA Choice Card, between those agencies and private healthcare providers.

In addition, we must always ensure to the fullest extent practicable that this healthcare data is secure and safe. Until VA is able to demonstrate that its providers are able to readily access the relevant information from DOD records to make the most informed decisions on treatment options, neither agency can declare mission accomplished.

As DOD pursues an overall of its EHR through the latest partnership for defense health and VA continues with its incremental plan to modernize the VistA EHR under the new VistA Evolution Program, I remain concerned that interoperability will no longer be a DOD and VA focus. I'm concerned that these separate efforts, at the end of the day, might not fully match the capabilities we envision while coming with a higher price tag for the American taxpayer.

The recent VA independent assessment found that VistA is in danger of become obsolete and that VA lacks standard clinical documentation, making it difficult to exchange EHR information among all VA medical centers. We need to take a realistic look at whether the VistA evolution program is the best means for VA to modernize its EHR system and achieve all the benefits and capabilities of interoperability with DOD and private providers.

As more servicemembers leave the military and as more veterans and servicemembers receive their healthcare from a combination of VA, DOD, and private providers, it is vitally important that DOD and VA work to achieve interoperability not only between the two agencies but with other healthcare providers treating veterans.

And, with that, I yield back, and thank you, Mr. Chairman, for scheduling this hearing.

Mr. HURD. Thank you, Ms. Kuster.

I will hold the record open for 5 legislative days for any members who would like to submit a written statement. And I want to thank the staffs of all the committees for helping us to be prepared for such an important hearing that we have going on today.

I'd like to also note the presence of our fellow colleague from the full Committee on Oversight and Government Reform, Mr. Hice and also Seth Moulton, Mr. Seth Moulton.

Without objection, Mr. Hice and Mr. Moulton are welcome to fully participate in today's hearing.

We will now recognize our witnesses. I am pleased to welcome Ms. LaVerne Council, Assistant Secretary for Information Technology and Chief Information Officer at the U.S. Department of Veterans Affairs.

Thank you for being here, Ms. Council.

Mr. Brian Burns, Deputy Director of Warfighter Systems Integration at the Office of Information Dominance at the U.S. Department of Veterans Affairs; Mr. Christopher Miller, program executive officer of Defense Healthcare Management Systems at the U.S. Department of Defense; Mr. David DeVries, Principal Deputy Chief Information Officer at the U.S. Department of Defense; and Ms. Valerie Melvin, Director of Information Management and Tech-

nology Resources Issues at the U.S. Government Accountability Office.

Welcome to you all, and thank you for being here.

Pursuant to Oversight and Government Reform Committee rules, all witnesses will be sworn in before they testify. Please rise and raise your right hand.

Do you solemnly swear or affirm that the testimony you are about to give will be the truth, the whole truth, and nothing but the truth?

Thank you. Please be seated, and let the record reflect that all witnesses answered in the affirmative.

In order to allow time for discussion, we would appreciate if you would limit your oral testimony to 5 minutes. Your entire written statement will be part of the record.

Assistant Secretary Council, you are recognized for 5 minutes. Thank you for being here.

WITNESS STATEMENTS

STATEMENT OF LAVERNE COUNCIL

Ms. COUNCIL. Thank you.

Chairman Hurd and Coffman, Ranking Members Kelly and Kuster, and members of the House Oversight and Government Reform Subcommittee and Information Technology and the House Veteran Affairs Subcommittee. Thank you for the opportunity to appear before you today to discuss interoperability, electronic health records, cybersecurity, and the state of the Office of Information and Technology, or OI&T, at the Department of Veterans Affairs.

I'm accompanied today by OI&T's lead for the Interagency Program Office, Deputy Director Brian Burns. Over the last 3-1/2 months, I've had the privilege to be a part of VA, where we have the greatest mission in government: to care for the Nation's veterans.

VA's Office of Information and Technology is at a critical inflection point. Persistent internal challenges exist in delivering IT services, and external pressures are compelling OI&T to change and adapt. OI&T supports each of VA's diverse lines of business, including the largest integrated healthcare system in the United States, a benefits processing organization equivalent to a medium-sized insurance company, one of the largest integrated memorial and cemetery organizations in the country, a court system, and many other components.

I believe we can and must do better to deliver excellent health care and benefits to our veterans through world class technology, and I'm delighted to discuss our new OI&T strategy with you today.

Our vision is to become a world class organization that provides a seamless unified veteran experience through the delivery of state-of-art technology. Our guiding principles are transparency, accountability, innovation, and teamwork. We will measure success, ensure accountability, invest in the capabilities of the OI&T employees and collaborate across VA to build trust.

One of our key organizational changes is the establishment of an Enterprise Program Management Office or EPMO. The EPMO will ensure visibility and governance of all programs and projects. As we establish EPMO, we will be integrate our four largest programs first VistA Evolution, health data interoperability; the Veterans Benefit Management System, or VBMS; and Medical Appointment Scheduling System, or MASS. For VistA Evolution, I have tasked the program leads, David Waltman from VHA and Alan Constantian from OI&T to deliver a business case that explains measurable outcomes for the program. After reviewing the business case, Under Secretary for Health, Dr. David Shulkin and I will determine the next steps. The development of a business case will be the standard from all programs from their inception.

Chairman Hurd, I agree, interoperability isn't just technology. It is clear to me that we need to establish a strong technical foundation through data visibility, accessibility, and interoperability. This is a precursor to the work happening in the IPO as well as improving the veteran experience. As you know, VA and DOD systems already share millions of health records. Having a veteran's complete health history from DOD and VA, as well as community providers, is critical to providing seamless, high-quality access to care and benefits.

We will continue to work closely with the IPO and Office of the National Coordinator to ensure national standard codes are used when describing our health information. I think that VA and DOD together should be leaders in this area.

When you think of data, you must also consider cybersecurity. As part of our overall strategy, our first area of focus is cybersecurity. We delivered an actionable far-reaching cybersecurity strategy and implementation plan to Congress on September 28 of this year. OI&T is committed to protecting all veterans' information and VA data and limiting access only to those with proper authority. The strategy establishes an ambitious yet carefully crafted approach to cybersecurity and privacy protections. Our strategy includes taking immediate steps to address the material weakness and includes many efforts already underway and scheduled to complete within the next quarter.

Chairman and ranking members, thank you again for the opportunity to discuss our new VA IT strategy with you. Throughout this transformation, our number one priority is always the veteran, by ensuring a safe and secure environment for their information as well as an overall improved experience with VA. I'm committed to seeing this strategy through and leaving behind a transformed OI&T when my term is over.

I'm happy to take your questions at this time. Thank you.

[Prepared statement of Ms. Council follows:]

**STATEMENT OF
MS. LAVERNE COUNCIL
ASSISTANT SECRETARY FOR INFORMATION TECHNOLOGY AND
CHIEF INFORMATION OFFICER
DEPARTMENT OF VETERANS AFFAIRS
BEFORE THE
HOUSE COMMITTEE ON VETERANS' AFFAIRS
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS (O&I)
AND THE
HOUSE OVERSIGHT AND GOVERNMENT REFORM
SUBCOMMITTEE ON COMMITTEE ON INFORMATION TECHNOLOGY**

October 27, 2015

Introduction

Chairmen Hurd and Coffman, Ranking Members Kelly and Kuster, and Members of the Committees, thank you for the opportunity to appear before you today to discuss the state of the Office of Information and Technology (OI&T) at the Department of Veterans' Affairs (VA). I am accompanied today by Brian Burns, Deputy Director of the Interagency Program Office. I am proud to be a part of the VA team, where we have the greatest mission in government: to care for our Nation's Veterans. I believe we can -- and must -- do better to deliver excellent healthcare and benefits to our Veterans through World-Class Information Technology (IT), and I am delighted to discuss our new OI&T Strategy with you today.

VA OI&T Is At a Critical Inflection Point

VA's Office of Information and Technology is at a critical inflection point. Persistent internal challenges exist in delivering IT services, and external pressures are compelling OI&T to change and adapt. With MyVA, we have the opportunity to become the authors of our own story, MyVA gives our team the chance to make a difference in the Veterans' experience.

Our aspiration is to transform OI&T into a world-class organization. IT is an enabler of each of VA's disparate lines of business, including the largest integrated healthcare

system in the United States; a benefits processing organization equivalent to a medium-size insurance company; one of the largest integrated memorial and cemetery organization in the country; a court system; and many other components.

In addition, we are rolling out a new strategic plan for OI&T. The new strategy has a new mission, vision, guiding principles, and strategic goals and I am proud to share these with you today. Our mission is to collaborate with our business partners to create the best experience for all Veterans. Our vision is to become a world-class organization that that provides a seamless, unified Veteran experience through the delivery of state-of-the-art technology. Our guiding principles are to be transparent, accountable, innovative, and team-oriented. We will establish a strong technical foundation that ensures alignment with VA's mission, data visibility and accessibility, data interoperability, infrastructure interoperability, information security, and enterprise services. Finally, we have to execute these goals through a prioritized set of strategic initiatives across our Now, Near, and Future time horizons: in order to stabilize and streamline core processes, to eliminate the material weaknesses, and to institutionalize a new set of capabilities to drive improved outcomes.

This transformation will be different. We will measure success, ensure accountability, invest in the capabilities of OI&T employees, and collaborate across the VA to build trust. Over the next six months, we will complete a number of quick wins – initiatives that will be initiated to drive maximum impact for business partners and Veterans in the short term – in order to drive immediate positive change and begin the transformation into a world-class IT organization that provides the best possible service to its business partners and Veterans.

A comprehensive review of the organizational assessments, strategic plans, and customer and employee feedback reveal persistent challenges within OI&T:

- *Customer focus*: insufficient collaboration between OI&T and customers and lack of service-level agreements
- *Standardization and quality*: aging IT infrastructure combined with low data quality and lack of integration
- *Leadership and organization*: leadership communication not effective, and key functions duplicated across OI&T and VA
- *Innovation*: lack of methods and processes to enable innovation for our customers
- *Governance*: OI&T not measuring what matters, leading to ineffective governance and inability to continuously improve
- *Project management*: current process burdened with excessive overhead; lacks consistency and accountability
- *Budgeting*: process disconnected from total lifecycle costs
- *Acquisition*: acquisition process not aligned across VA and OI&T
- *Workforce development*: insufficient talent management

In addition, significant factors increase pressure on OI&T to change and adapt. VA faces *changing Veteran demographics* as the aging Veteran population seeks out and uses benefits (e.g., long-term care) at significantly higher rates. OI&T has *shifting business partner needs*, with new and increasing diversity of customer needs, types of applications, and complexity of the IT support required (e.g., Telehealth) driving the overall demand on OI&T. *Rising public expectations* have become a factor due to increasing public discourse around willingness and trust in government to deliver health services for Veterans. *Growing cyber threats* are a significant factor with the persistent risk of cyber attacks, combined with the continuing digitization of health care, and the increasing exposure, vulnerability, and potential consequences of a data breach. The *next generation IT delivery models* increase pressure through the evolution of external IT delivery models and with the increasing adoption of services and more commercial-style techniques (e.g., learning by doing). A movement toward *consumerization of IT* is

an added pressure factor as the technology landscape, fueled by an emphasis on real-time, mobile-first, hyper-targeted digital experiences, increasingly demands the same experiences in the workplace. Finally, the rapidly growing number of sensors and actuators connected by networks to computing systems, known as the *Internet of Things*, drives complexity on how to manage our environments, blurring the lines between IT and the “things”.

The Opportunity Is Now

We have established four key OI&T objectives that align with myVA objectives. First, we will implement our OI&T strategy through three phases: Now, Near, and Future. These phases encompass a durable, long-term strategy built to transcend 36 months. Second, we will adopt a customer-centric mindset throughout the end-state design process, including collaborative engagement with all key stakeholders. Third, we will institutionalize a “buy-first” strategy that leverages existing commercial solutions first before building internally. Finally, will incorporate best practices from the public and private sector to spur agility, efficiency, effectiveness, and innovation in service delivery.

The opportunity is now, because we have the key components for success. We have executive-level support from the Secretary and Deputy Secretary, and the CIO role at VA is empowered with unique flexibility. I've been impressed to find that we have a hard working, mission-oriented staff that cares deeply about creating a better experience for the Veteran. Through Congressional action, we have a centralized IT and sufficient resources. Finally, we have the ability to deliver for our business partners when they need us the most.

We Will Transform

The strategic goals and framework are aligned with the key priorities from all VA strategic plans. Under our first theme of *stabilizing and streamlining core processes and platforms*, our plan calls for the establishment of an Enterprise Program Management Office, as well as a data management organization. We will also redesign our enterprise processes. Our theme of *eliminating the material weaknesses* focuses on addressing material weaknesses identified by the Federal Information Security Modernization Act (FISMA) and (FISCAM), implementing our enterprise cybersecurity plan, and establishing a quality and compliance organization. Our final theme of *institutionalizing a new set of capabilities to drive improved outcomes* calls for establishing account management, transforming our Service Delivery Organization, and launching a new vendor management function.

This transformation will be different because ensuring successful execution of this plan requires a new approach. We will deliver *Quick wins* and we will implement *rigorous performance management*, and will enforce it by measuring success through specific metrics tied to Veteran outcomes. We will *institutionalize a “buy-first” strategy*, leveraging existing commercial solutions first before building internal capabilities. We will invigorate *employee engagement and accountability*, creating performance goals that cascade throughout the organization, giving each employee a role in making our strategy a reality. We will improve *leadership and skills training*, addressing capability gaps across the workforce, including developing leaders that can see the big picture, improve their performance, and drive relentless change. And, we will improve *cross-VA collaboration*, building trusted relationships across all levels, including transparent communication across the VA to improve Veterans and employees' experience.

EPMO: Interoperability and Electronic Health Record Modernization

Finally, I would like to focus specifically on two of our quick wins, the establishment of an Enterprise Program Management Office (EPMO) and the creation of the Enterprise Cybersecurity Strategy. The EPMO is especially relevant to the committee's interest in VA's interoperability and health record modernization efforts by improving execution and outcomes for Veterans and VA. The IT EPMO will initially host our biggest IT programs for better project portfolio and resource tracking, and will improve communication around these programs and projects. Upon establishment of the EPMO, we will integrate four of our biggest programs into the EPMO: VistA Evolution, Interoperability, the Veterans Benefits Management System (VBMS), and Medical Appointment Scheduling System (MASS).

The IT EPMO will ensure alignment of program portfolios to strategic objectives and provide visibility and governance into the programs. It will also allow for better analysis of and reporting on programs, projects, resources, and timelines to optimize for the best mix of each. This will help ensure the overall health of portfolios through reporting and analysis of portfolio performance metrics. For enterprise initiatives, the IT EPMO will help program and project teams to better develop execution plans, monitor progress, and report status. It will enable partnerships with IT architects for enterprise collaboration, and will serve as a program/project resource for delivery of enterprise and cross-functional programs. Doing so will help identify Shared Services Enterprise Programs and will help plan resource requirements with portfolios and architecture. Finally, with an IT EPMO, communication will improve through better management of internal and external communication and employee engagement. It will enable the coordination of enterprise communications through the development of comprehensive, enterprise communication strategies to drive consistency of messaging.

We have begun to identify the right leaders for the EPMO, as well as the senior leaders who will lead the initial programs. Specifically for VistA Evolution, I have tasked the program leads to create a clear and persuasive business case that clearly explains

measurable outcomes to Veterans. They will deliver this case next week to myself and Dr. David Shulkin, the Under Secretary for Health. Dr. Shulkin and I, the co-Executive Sponsors for the program, will determine the next steps in this program based on the case that is presented.

Regarding interoperability, VA and DoD share millions of health records between our systems today. Having a Veteran's complete health history, from both DoD and VA, as well as community providers, is critical to providing seamless, high quality access to care and benefits. In the third quarter of FY 2015, the Departments maintained data for 7.4 million unique correlated patients and unique DoD patients registered in the Master Veterans Index. Over the past year, VA has also seen rapid growth in utilization of the Joint Legacy Viewer, or 'JLV'. JLV is a read-only web based health record viewer that allows both VA and DoD to see a Veteran or Service member's complete health history from both Departments, integrated on a single screen. As of last week, VA had over 19,000 authorized JLV users, up from just a few hundred this time last year, when JLV became available at all VA medical centers. Currently, we are making JLV available to nearly 1,000 new users each month, with about 25 percent in VBA and 75 percent in VHA.

However, sharing data is only the first step in interoperability. Shared data needs to be used to provide better health care and benefits services to Veterans. I am happy to report this is happening, and we are learning a lot from our users in the field which is helping us iteratively refine and improve our new products. A VA dermatologist in Seattle estimates JLV saves him about a minute in completing a tele-dermatology consultation. He sometimes completes over 50 such consults a day, so a minute saved on each really adds up. One of our primary care providers has said JLV is particularly helpful for finding DoD immunizations for her patients, and is using JLV regularly in her primary care clinic. In VBA, users are telling us JLV is very helpful for evaluating cases with missing records, and that it helps them find a lot more information for Guard and Reserve Veterans. We are also working on community facing pilots for JLV, as part of our strategy to improve interoperability and data exchange with providers outside the

VA and DoD. One pilot program is exploring use of JLV at CVS Minute Clinics in the Palo Alto, California area. In this pilot, Veterans would have the option of being referred to a Minute Clinic for minor illnesses, and could authorize VA to provide health information to the Minute Clinic via the Joint Legacy Viewer.

All of the great capabilities we have developed in JLV with our DoD partners will be carried forward into our new enterprise Health Management Platform, or 'eHMP'. We have recently brought eHMP into production in the Austin Information Technology Center, and in Hampton, Virginia, and we will have many more sites in production over the next several months. The next release of eHMP is a modern, read-write web application and data services platform, which will ultimately replace the current Computerized Patient Record System used today by all VA providers at the point of care. eHMP will natively federate all available health information for Veterans, from all sources in DoD, VA, and community providers from whom we have data. This is a tremendous step forward for VA health information technology, and will allow us to more effectively support Veteran centric, team based, quality driven care.

Another critical component for advancing interoperability is the Veterans Health Information Exchange program (VLER Health), which provides information exchange with our Community Partners through eHealth Exchange and Direct. VLER Health focuses on: 1) engaging Veterans to sign authorization forms to exchange their health care data; 2) onboarding Community Partners to build a national network; 3) developing stable and scalable technical systems that provide secure conduits for Veterans' health information exchange; and 4) accelerating VA clinical adoption. In FY2015 the VLER Health program grew significantly, with a current total of 59 partners and a 300 percent increase in use of the program by VHA clinicians. Obtaining Veteran Authorization forms continues to be a significant barrier for our external partners, as Opt-In consent is required before VHA can release information with community health care providers for treatment of shared patients. A Legislative Proposal was submitted earlier this year for Congress to consider amending Title 38 United States Code Section 7332 to permit VA to disclose health information protected by the statute to non-VA health care providers

for treatment of shared patients without the written authorization of the patient. This amendment would permit VA to move to an Opt-Out consent model for health information exchange consistent with most national partners and providers, and permit VA to share this health information with CHOICE providers treating Veterans more efficiently and timely.

In all of our interoperability efforts, VA is working closely with the DoD/VA Interagency Program Office and the Office of the National Coordinator for Health Information Technology to ensure correct national standard codes are used for describing our health information data. We are also beginning to discuss additional standards needed for information reconciliation, for domains such as allergies and medications.

Enterprise Cybersecurity Strategy

One of my first acts as CIO was the formation of the Enterprise Cybersecurity Strategy Team (ECST). We delivered an actionable, far reaching, cybersecurity strategy and implementation plan for VA to Congress on September 28, 2015, as promised. OI&T is committed to protecting all Veteran information and VA data and limiting access to only those with the proper authority. Meeting this commitment requires a comprehensive strategic approach that spans VA and the cyberspace ecosystem in which Veterans, VA, and VA's partners operate. By its very nature, the Internet is an open system facilitating the free flow and exchange of information, ideas, and commerce, embodying some of the very principles upon which this Nation was founded. The very same qualities are accompanied by a growing number of vulnerabilities and risks threatening our Nation's security, stability, and prosperity.

VA, its core constituents, and external partners are all subject to a wide variety of these threats. Given the high degree of connectivity, mutual interdependence, and reliance on integrated open platform technology, meeting cybersecurity challenges requires dedicated strategic attention. VA's Enterprise Cybersecurity Strategy is focused on building a comprehensive cybersecurity capability supportive of VA's overall

transformation effort to secure the execution of the MyVA mission as it modernizes VA technical culture, processes and capabilities.

The strategy answers several critical questions:

- What are the right things to do to achieve our cybersecurity mission and vision?
- How do we know we are doing the right things?
- Are we making decisions and investments that deliver our cybersecurity strategy?
- Are we aligning our resources to deliver the strategy?
- Are we achieving intended outcomes?

The strategy is predicated on protecting and countering the spectrum of threat profiles through a multi-layered defense in depth model enabled through five strategic goals.

1. *Protecting Veteran Information and VA Data:* Ensuring secure technology and data systems to protect all VA data is insufficient in and of itself.
2. *Defending VA's Cyberspace Ecosystem:* Providing secure and resilient VA information systems technology, business applications, publically accessible platforms, and shared data networks is central to VA's ability to defend VA's cyberspace ecosystem. Addressing technology needs and operations that require protection, rapid response protocols, and efficient restoration techniques is core to effective defense.
3. *Protecting VA Infrastructure and Assets:* Protecting VA infrastructure requires going beyond the technology and systems wholly owned and operated by VA within its facilities to include the boundary environments that provide potential access and entry into VA by cyber adversaries.
4. *Enabling Effective Operations:* Operating effectively within the cybersphere requires improving governance and organizational alignment at enterprise, operational, and tactical levels (points of service interactions). This requires VA to integrate its cyberspace and security capabilities and outcomes within larger governance, business operation, and technology architecture frameworks.

5. *Recruiting and Retaining a Talented Cybersecurity Workforce:* Strong cybersecurity requires building a workforce with talent in cybersecurity disciplines to implement and maintain the right processes, procedures, and tools.

VA's Enterprise Cybersecurity Strategy is a major step forward in VA's commitment to safeguarding Veteran information and VA data within a complex environment. The strategy establishes an ambitious yet carefully crafted approach to cybersecurity and privacy protections that enable VA to execute its mission of providing quality healthcare, benefits, and services to Veterans while delivering on our promise to keep Veteran information and VA data safe and secure.

Conclusion

Chairmen and Ranking Members, thank you again for the opportunity to discuss our new strategy for IT at VA with you today. Throughout this transformation, our number one priority is always the Veteran – ensuring a safe and secure environment for their information, and approaching the security of Veteran data from the Veteran's point of view in concert with Secretary McDonald's MyVA strategy. I am committed to seeing this strategy through and leaving behind an improved OI&T when my term is over. I am happy to take your questions at this time.

Mr. HURD. Ms. Council, thank you for being here. I know you're pretty fresh to the job. You're stepping into a big role. I'm looking forward to working with you on this topic.

Mr. Miller you are now recognized for 5 minutes.

STATEMENT OF CHRISTOPHER A. MILLER

Mr. MILLER. Chairman Hurd, Ranking Member Kelly, Chairman Coffman, and Ranking Member Kuster, distinguished members of the committee, thank you for the opportunity to address you today on the state of information technology within the Department of Defense and our efforts to achieve interoperability with the Department of Veterans Affairs.

I am honored to represent DOD as the secretary's program executive officer responsible for the Department's efforts to improve interoperability and modernize our electronic health record. Our servicemembers, veterans, retirees, and their families deserve innovating less than the best possible health care and services that DOD and VA can provide. DOD is committed to ensuring servicemembers and their families are ready to support operational mission requirements and ensuring continuity of care as members transition to veteran status.

Our DOD healthcare providers have requested and need a modern system that can support increasing demands, including data sharing. To this end, DOD is committed to two equally important objectives, improving data interoperability with both VA and our private sector healthcare partners and successfully transitioning to a state of the market electronic health records that is interoperable with VA and the commercial healthcare systems used by TRICARE partners.

Since October 2013, we have made significant progress in achieving both of these objectives. Our actions speak louder than our words and demonstrate our steadfast commitment. Today, DOD and VA share a significant amount of health data, more than any other two major health systems. Over the past 24 months, we have deployed four major interoperability software releases, conducted numerous test events, mapped more than a million terms to national standards, and deployed the system to over 200 DOD and VA sites.

Clinicians are currently able to use our existing software applications to view records of more than 7.4 million shared patients who have received care from both Departments. Both Departments' healthcare providers and VA claim adjudicators successfully accessed the system nearly a quarter million times per week. This data is available in realtime, and the number of records viewable by both Departments continues to increase.

As a result of this progress, DOD will certify to Congress that it has complied with the Fiscal Year 2014 National Defense Authorization Act requirements for interoperability with the VA by the end of this month. Most importantly, we are getting a tremendous amount of feedback from our users in both Departments.

On a parallel path, DOD's modernization effort is well under way. Our goal is a system for the future which is open and flexible so that it can easily adapt to meet changing requirements.

After a rigorous and comprehensive evaluation of industry proposals, DOD awarded a contract without protest in July 2015 to a team led by Leidos that includes 34 other partners. The contractor team will provide an off-the-shelf suite of products that is ONC certified, secure, interoperable, and meets our operational requirement. The system must support the full range of military operations to include health readiness, casualty care, humanitarian assistance, disaster response, and population health.

As a result of this competitive acquisition strategy, DOD's lifecycle costs have been reduced from \$16 billion the previous iEHR strategy to less than \$9 billion today. We are on track to begin testing the system this coming winter to support our initial fielding in the Pacific Northwest.

Through our close collaboration with the Office of National Coordinator for Health IT, we are aligning our modernization interoperability efforts with nationally recognized data standards and industry best practices. The adoption of these will ensure that the health data of our servicemembers and veterans is interoperable with the health systems of our private sector healthcare providers, which account for over 60 percent of the care provided within the military health system.

We have the opportunity to save time, save money, and most importantly, save lives. Our progress the past 24 months has been a matter of getting back to acquisition basics, getting the requirement right, thinking like a taxpayer, delivering on our promises, and developing our technical work force. We clearly understand that our mission is not complete. To remain successful, we must continue to stay focused, innovate, and hold ourselves to the highest standards of excellence.

Chairman Hurd, Ranking Member Kelly, Chairman Coffman, and Ranking Member Kuster, thank you again for the opportunity to testify today. The Department greatly appreciates the Congress' continued interest and efforts to help us deliver the healthcare that our Nation's veterans, servicemembers, and their dependants deserve. The Department of Defense and our colleagues at the Department of Veterans Affairs will continue to work closely together in partnership with Congress to deliver the benefits and services to those who sacrifice so willingly for our Nation, whether it's on the battlefield, at home with their families, or after they have faithfully concluded their military service. Again, thank you for this opportunity, and I look forward to your questions.

[Prepared statement of Mr. Miller follows:]

STATEMENT BY

MR. CHRISTOPHER A. MILLER
PROGRAM EXECUTIVE OFFICER
DEFENSE HEALTHCARE MANAGEMENT SYSTEMS

BEFORE THE
HOUSE OVERSIGHT AND GOVERNMENT REFORM COMMITTEE
INFORMATION TECHNOLOGY SUBCOMMITTEE
AND
HOUSE VETERANS AFFAIRS COMMITTEE
OVERSIGHT AND INVESTIGATIONS SUBCOMMITTEE
OCTOBER 27, 2015

Chairman Hurd and Ranking Member Kelly, Chairman Coffman and Ranking Member Kuster, thank you for the opportunity to address your respective subcommittees today on the state of information technology (IT) within Department of Defense (DoD) and our efforts to achieve interoperability with the Department of Veterans Affairs (VA). I am honored to represent DoD as the Secretary's program executive responsible for the Department's efforts to modernize our electronic health records (EHRs) and to make them interoperable with those of VA and our private sector providers.

Our Service members, Veterans, retirees, and their families deserve nothing less than the best possible healthcare and services that DoD and VA can provide. Our mission is to fundamentally and positively impact the health outcomes of active duty military, Veterans, and eligible beneficiaries. To this end, DoD is committed to two equally important objectives: improving data interoperability with both VA and our private sector healthcare partners, and successfully transitioning to a state-of-the-market electronic health record that is interoperable with VA and the commercial healthcare systems used by our TRICARE providers.

Since October 2013, we have made significant progress in achieving both of these objectives. Today, DoD and VA share a significant amount of health data – more than any other two major health systems. DoD and VA clinicians are currently able to use their existing software applications to view records of more than 7.4 million shared patients who have received care from both Departments. This data is available today in near real time and the number of records viewable by both Departments continues to increase. Both Departments' healthcare providers and VA claims adjudicators successfully access data through our current systems nearly a quarter of a million times per week. As a result of this progress, DoD will certify to Congress that it has complied with the FY14 National Defense Authorization Act (NDAA) requirement of interoperability with VA by the end of this month.

On a parallel path, DoD's modernization effort is well underway. An independent analysis of both our own requirements in 2013 and the robust healthcare IT marketplace concluded that the acquisition of an off-the-shelf product would allow DoD to leverage the latest commercial technologies, improve usability and interoperability with the private sector as well as with VA,

and ultimately provide savings to the American taxpayer. Most importantly, interoperability with VA and the private sector remains paramount. The new EHR system will seek to achieve greater interoperability with the VA, other federal agencies, and the private sector by using federally recognized Office of the National Coordinator (ONC) standards. The contract for this new EHR was competitively awarded without protest in July 2015 to a team led by Leidos that includes 34 other partners.

DoD and VA remain in mutual agreement that interoperability with each other and our private sector care partners is a top priority. We agree that this broader interoperability is not dependent on a single system. This strategy makes sense for both Departments and provides the most effective approach moving forward to care for our Service members, Veterans, retirees, and their families. We continue to have direct senior-level oversight from both Departments as well as rigorous oversight from both Congress and the Executive Branch.

GOAL 1: PROVIDE SEAMLESS INTEGRATED SHARING OF STANDARDIZED HEALTH DATA AMONG DOD, VA, AND PRIVATE SECTOR PROVIDERS

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

Achieving this type of seamless data integration is dependent on achieving a common set of technical standards across all healthcare venues, not on sharing the same software system. Since 2008, DoD and VA have been exchanging a significant amount of electronic information. Unfortunately, most of the information had not been standardized so that it could be used for automated reminders or in electronic clinical decision support. As an example, DoD and VA had different names for “blood glucose” in their software systems, making it difficult for clinicians to integrate and track blood sugar levels of diabetics across the Departments. For data sharing and

interoperability to be meaningful and useful to clinicians, healthcare data must be mapped to standard codes and displayed in a user-friendly way. Since the majority of care comes from outside of DoD, this is equally important for sharing data with our private sector providers, who use a variety of different health IT systems.

Much of this work has been accomplished with the assistance of the DoD/VA Interagency Program Office (IPO), which leads and coordinates the two Departments' adoption of and contribution to national health data standards to ensure seamless integration of health data between DoD, VA and private healthcare providers. With the assistance of the IPO, DoD has completed the initial mapping of all 21 domains requiring national standard terminologies, representing more than 1.8 million unique DoD clinical terms, thereby establishing the foundation for our seamless data integration. Over the past year, we have completed four data mapping deliveries. DoD subject matter experts and the IPO conducted independent quality assurance reviews of these mappings to ensure their accuracy. Additionally, DoD has established a data governance process to actively manage and continually improve utilization of national standards as they evolve in the future. These domains are available to VA clinicians and benefits analysts through the Defense Medical Information Exchange (DMIX) Program and the Health Artifact and Image Management Solution (HAIMS). Further, much of our data is now mapped to national standards, increasing the ability to share this information with many different health IT systems in use by our private care partners. In the "blood glucose" example mentioned previously, both VA and DoD clinicians will now see a common, standardized name for a patient's blood glucose results that can also be matched up with data from the private sector. Moving forward, we recognize that interoperability requires continual improvement. To this end, we plan to upgrade these national standards and data maps with regular updates to further improve the portability of healthcare information between EHR systems.

Building upon the achievement of common data standards set between the two Departments, DoD has continued to develop and deploy follow-on interoperability initiatives through the DMIX program office. DMIX is responsible for coordinating DoD's interoperability efforts with VA and the private sector and has developed a schedule that includes mapping DoD data and clinical domains for which there is structured data, continued deployment of a joint viewer

providing an integrated display of DoD, VA and private sector data for clinicians, and planning the testing of DoD's EHR modernization acquisition for interoperability requirements. So far, DMIX has delivered iterative software releases over 21 months that included key functional engagement from both Departments. They also included rigorous pre- and post-operational assessments led by DoD's independent testing activity.

This work includes development and expansion of the Joint Legacy Viewer (JLV), which provides an integrated display of DoD, VA, and private sector data for clinicians. The Department has expanded the capacity, functionality, and number of users of JLV. Originally developed as a pilot program with 275 users at 9 sites, DoD has now fielded the JLV to more than 70 locations with over 8,480 DoD users. JLV also supports nearly 19,000 VA users at 150 VA Medical sites and at 56 out of the 57 Veteran Benefits Administration Regional sites. As JLV capacity and use increase, the Department will begin to phase out existing legacy viewers, with full consolidation planned in FY 2016. On September 18, 2015, DMIX received Milestone C approval based on testing results, and readiness for system deployment and operational use. Testing included aggressive cybersecurity assessments intended to pinpoint potential weaknesses in DMIX data security. During the testing, DMIX successfully executed 262 out of 269 test cases, with the unsuccessful test cases being addressed in subsequent program releases. User assessments significantly exceeded the required score for functionality and usability, scoring a 77 out of a required 70. Further follow on independent operational and cybersecurity testing is planned for later this fiscal year.

We are leveraging our knowledge and expertise with the VA to exchange health information with our TRICARE healthcare providers. Today, more than 60% of all Service member, dependent, and beneficiary healthcare is provided outside a military treatment facility through TRICARE network providers. DoD exchanges its electronic patient health data with the public and private sector through its connection to the national e-Health Exchange. DoD is focused on deploying private sector interoperability to our military treatment facilities around the country that have an associated private sector Health Information Exchange (HIE) that is connected to the eHealth Exchange. DoD is currently connected to 8 HIEs, and is one of 107 participants in the eHealth Exchange. DoD plans to connect to an additional 7 HIE partners by the end of the

calendar year, based on functional and business factors. In 2016, we plan to continue to onboard additional HIE partners as our mission dictates.

Our Service members overseas face unprecedented challenges in some of the world's most hostile environments, and an important part of preparing our Soldiers, Sailors, Airmen and Marines to face these challenges is the reassurance that we are committed to taking care of them once they return home safely. It is incumbent upon DoD and VA to ensure that our clinicians have access to accurate and timely data to fundamentally and positively impact the health outcomes of active duty military, veterans, and eligible beneficiaries. DoD has a steadfast commitment to maintaining and enhancing our interoperability efforts. Interoperability requires continual improvement, innovation, and collaboration to ensure our users have the right information at the right time to provide the best healthcare decisions for our Service members, veterans, and their families.

GOAL 2: MODERNIZE THE ELECTRONIC HEALTH RECORD (EHR) SOFTWARE AND SYSTEMS SUPPORTING DOD AND VA CLINICIANS.

In addition, DoD's acquisition of a modernized EHR system will reflect our unwavering commitment to providing our community with the best healthcare tools available and to furthering our Departments' interoperability efforts. DoD's analysis in 2013 found that many viable commercial EHR products could potentially meet our requirements in a cost-effective manner that would allow us to benefit from industry's competitive EHR software marketplace.

Since October 2013, the Defense Healthcare Management System Modernization (DHMSM) program has conducted multiple Industry Days and released multiple Requests for Information and draft RFPs. The final RFP was released on August 25, 2014 and proposals were submitted on October 31, 2014. The source selection process was conducted using robust evaluation procedures with analysis provided by functional, technical, and cost subject matter experts, including those with VA and ONC. Simultaneously, the DoD healthcare community engaged over 800 subject matter experts representing medical specialty and care provider subgroups throughout the Services to determine standard clinical business processes that will be used to

configure the new EHR. DoD awarded the contract without protest to a team headed by Leidos in July 2015. The modernized EHR system will be rigorously and independently tested prior to and throughout deployment to ensure it meets operational and interoperability requirements for effectiveness, suitability and interoperability with VA and private sector healthcare providers. Testing will also ensure that the new EHR conforms to current DoD cybersecurity and DoD Risk Management Framework requirements, as required in the RFP, and that data is able to be securely shared across VA Trusted Internet Connection Gateways (TIC GWs), providing secure communication between VA and DoD networks via the Medical Community of Interest (MED-COI) Enterprise Gateways.

Our early engagement with industry also reinforced the value of establishing a realistic deployment timeline that supports effective user adoption. Our aggressive timeline is consistent with similar EHR modernization efforts in the commercial industry. The program has tailored its acquisition strategy to streamline documentation and gain schedule efficiencies. We are committed to collaborating with industry and pursuing this modernization in a transparent and fair way that maximizes competition. In alignment with the deadline set out in the FY2014 NDAA, Initial Operational Capability is planned for the end of 2016 at eight sites, representing all three Services, in Washington State. Full Operational Capability, currently estimated for FY2022, will include deployment to medical and dental services of fixed facilities worldwide. Deployment will occur by region (three in the continental U.S. and two overseas) in 23 waves plus the IOC “wave.” Each wave will include an average of three hospitals and 15 physical locations, and last approximately one year. 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 is smart to do so.

Ultimately, the cost savings of this new strategy over the previous one is substantial. DoD’s portion of the previous iEHR strategy alone was over \$16 billion. With the advent of DHMSM, the initial rough order of magnitude cost estimate was around \$11 billion, an immediate savings of nearly \$5 billion. However, through the rigor of our competitive acquisition process, the cost estimate has been revised downward to a cost of less than \$9 billion today. Moving forward, we

are continuing to look for ways to further reduce the cost of the program across its life cycle to provide maximum value to our Service members and the American taxpayer.

CONCLUSION

Chairman Hurd and Ranking Member Kelly, Chairman Coffman and Ranking Member Kuster, thank you again for the opportunity to testify today. DoD has taken very seriously its responsibility to provide first-class healthcare to our Service members and their beneficiaries, and to enable the seamless sharing of integrated health records with VA and our private sector healthcare partners. Looking forward, we will continue to improve data sharing efforts with VA and the private sector to create an environment in which clinicians and patients from both Departments are able to share current and future healthcare information for continuity of care and improved treatment outcomes.

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

Mr. HURD. Mr. Miller, I appreciate you being here today.
And now I'd like to recognize Mr. DeVries for 5 minutes for your opening statement.

STATEMENT OF DAVID DEVRIES

Mr. DEVRIES. Good afternoon, Chairman Hurd, ranking members, distinguished members of both subcommittees. Thank you for the opportunity to testify here today on the Department's cybersecurity posture and our information technology in this very important topic called, "electronic health record." I am a veteran. I still serve in today's Nation here because I care about the servicemember and our families and the commitment to the quality there for the care.

I am Dave DeVries, the Department of Defense Principal Deputy Chief Information Officer. Simply put, the deputy DOD CIO. I share one imperative with the CIO, Mr. Terry Halvorsen, to ensure the Department has access to the information, the communication networks, the decision support tools needed to successfully execute while warfighting and business support missions of today.

Today I'm going to talk to you briefly about some of our efforts underway to ensure that DOD can execute its missions in the face of increasingly cyber-aggressive threats and also how we're working with the government, industry, and international partners to accomplish our secure information sharing capabilities, our cybersecurity missions while improving our ability to share securely with both industry and the public.

We are in the business of defense. That requires us to be integrated in almost every discipline you can think of, acquisitions, health, logistics, real estate, food, distribution, industry control systems, and many, many more. Every sector out there in the public side, we represent inside DOD and need to protect that information as well as share it securely.

While our top goal is to deliver capabilities more effectively and efficiently, we also need to maximize security in a budget-constrained environment worldwide. Our cyber adversaries are agile, diverse, and sophisticated, and we must be able to maneuver in several worlds at unprecedented speeds to protect our Nation's assets.

The Department's fiscal year 2016 IT budget request is 36.9 billion. This request included funding for a broad variety of IT, ranging from DOD warfighting command-and-control communication system, our computing services; cybersecurity; enterprise services, like collaboration and electronic mail; and intelligence support systems; and business systems. These investments support mission critical operations. They must be delivered both on the battlefield and in an office environment.

We will continue to focus attention on cybersecurity and take aggressive action to counter cyber threats to our networks and weapons systems. In today's networked world, this requires collaboration and cooperation of many partners, other government agencies, industry partners and allies to ensure we are mitigating these threats and vulnerabilities to our national security interests. You have my written comments as we prepared them before coming in

here. I welcome the questions in our upcoming discussions. Thank you.

[Prepared statement of Mr. DeVries follows:]

32

STATEMENT BY
DAVID DEVRIES
PRINCIPAL DEPUTY
DEPARTMENT OF DEFENSE CHIEF INFORMATION OFFICER

BEFORE THE
HOUSE OVERSIGHT AND GOVERNMENT REFORM COMMITTEE'S
INFORMATION TECHNOLOGY SUBCOMMITTEE AND THE
VETERANS' AFFAIRS COMMITTEE'S OVERSIGHT AND
INVESTIGATIONS SUBCOMMITTEE
ON

"VA and DoD IT: Electronic Health Records Interoperability"

OCTOBER 27, 2015

NOT FOR PUBLICATION UNTIL RELEASED
BY HOUSE OVERSIGHT AND GOVERNMENT REFORM COMMITTEE'S
INFORMATION TECHNOLOGY SUBCOMMITTEE AND THE VETERANS'
AFFAIRS COMMITTEE'S OVERSIGHT AND INVESTIGATIONS
SUBCOMMITTEE

Introduction

Good afternoon Chairmen, Ranking Members, and distinguished Members of both Subcommittees. Thank you for the opportunity to testify today on the Department's cybersecurity posture and information technology (IT) policies. I am David DeVries, the Department of Defense Principal Deputy Chief Information Officer (DoD CIO). I serve as the deputy principal advisor to the Secretary of Defense for information management, IT, cybersecurity, satellite communications, positioning, navigation and timing, spectrum, and nuclear command, control and communications matters. My office provides strategy, leadership, guidance and oversight of the Department's information technology and cybersecurity efforts. As the Principal Deputy DoD CIO, I have one imperative – to ensure the Department has access to the information, the communication networks, and the decision support tools needed successfully execute our warfighting and business support missions. Our mission is to ensure that these capabilities can be depended upon in the face of threats by a capable adversary in all conditions from peace to war, and particularly in the face of cyber warfare by such an adversary

Today I would like to provide you with an overview of the Department's efforts to secure our information and networks, and to ensure DoD can execute its missions in the face of increasing cyber threats. My office is working closely with partners across the U.S. government, industry, and international partners to accomplish our cybersecurity mission, and we are improving our ability to share with industry and the public. DoD has astoundingly complex challenges. The Department has over 1.4 million active-duty men and women, 718,000 civilians, and 1.1 million National Guard and Reserve members. More than 450,000 of our employees are overseas. We have several hundred thousand buildings, and structures located in more than 5,000 different locations or sites, and on 30 million acres of land. We have four million computers on our unclassified networks alone. We are enormous on the enterprise network scale. By our numbers, we have the world's biggest enterprise network. Our IT/Cyber budget was nearly \$40 billion in fiscal year 2014, with nearly \$5 billion invested in cybersecurity. If we were included in the Fortune 500, the Defense Department would be at the top of the list.

The Department's IT is complicated. We are in the business of defense, but that requires us to be integrated in almost every discipline you can think of: acquisitions, health, logistics, real estate, food distribution, industrial control systems, and more. The DoD CIO's office is striving to

improve information sharing and justified access as well as data strategies and storage across all of these diverse communities of interest, including across the Services, Defense Agencies, Combatant Commands, and our international partners; all while trying to do this in a more secure manner. While our top goal is to deliver capabilities more effectively and efficiently, we also need to maximize security in a budget constrained environment worldwide. Our cyber adversaries are agile, diverse and sophisticated and we must be able to maneuver in the cyber world at unprecedented speeds to protect our nation's assets. Adapting the ability to innovate rapidly and soundly presents a challenge to our process oriented Department of Defense. However, we are driving our leaders to evolve.

IT/Cyber Budget

The Department's Fiscal Year (FY) 16 IT budget request is \$36.9 billion. As the DoD CIO testified before the House Armed Services Committee Emerging Threats and Capabilities Subcommittee last February, this request includes funding for a broad variety of IT, ranging from DoD warfighting, command, control, and communications systems, computing services, cybersecurity, enterprise services like collaboration and electronic mail, and, intelligence and business systems. These investments support mission critical operations that must be delivered both on the battlefield and in an office environment. They also provide capabilities that enable the Commander-in-Chief to communicate with and direct the military, as well as command and control, intelligence, logistics, medical and other warfighting and business support functions throughout the Department. The overall IT budget includes a request for \$5.5 billion for the Department's cyberspace operations and activities. These are designed to ensure that essential Department missions work well in the face of growing cyberattacks while reducing the costs of these efforts and accomplishments. These cyber efforts continue to receive the highest-level attention and support of the Department.

Last year Congress passed the Federal IT Acquisition Reform Act (FITARA) as part of the FY15 National Defense Authorization Act. DoD applauds the intent of FITARA to increase the stature of agency CIOs in the decision-making processes of their respective agencies, and improve the overall management of IT investments government-wide. For those agencies that lack the long-standing requirements, acquisition and budgeting processes the DoD has, FITARA provides a structure that can help improve how government buys, implements and manages IT products,

systems and services. The Department recently completed its implementation plan which describes how DoD will use its existing processes and procedures to satisfy those portions of FITARA that apply to the Department and the Office of Management and Budget (OMB)'s "Management and Oversight of Federal Information Technology," guidance. FITARA re-enforces current DoD CIO authorities and responsibilities for DoD's IT investments.

Department's Cybersecurity Strategy – Cybersecurity Discipline Implementation Plan

As you know, adversaries are becoming increasingly aggressive in their cyber-attacks on the Department's and Federal computer systems. These attacks put all of us and our missions and information at risk. The Office of Personnel Management breach and Joint Staff unclassified network attacks are recent examples that underscore the importance of cybersecurity. To address the Secretary's top priority - cybersecurity, I am working very closely with the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)), Commander of U.S. Cyber Command (USCYBERCOM) and Under Secretary of Defense for Policy, as well as the Combatant Commands, Services and Agencies on an aggressive, multifaceted DoD Cybersecurity Campaign. This Cybersecurity Campaign is in direct alignment with the Department's Cybersecurity Strategy and is being executed as we speak via two synchronized efforts: 1) The DoD Cybersecurity Discipline Implementation Plan and 2) the DoD Cybersecurity Scorecard. Nearly every single one of the successful network exploitations that DoD has had to deal with can be traced to one or more human errors that allowed entry into the network. So raising the level of individual cybersecurity awareness in performance is absolutely paramount. Accordingly, we're working to transform our cybersecurity culture by improving human performance and accountability. Both are critical to achieving the strategic goal of defending information networks, security data, and mitigating risks to missions established in the Cyber Strategy. We are working with support of the highest levels of the Department to create a cyber culture and advance cyber discipline through leadership, accountability, and transparency.

The DoD Cybersecurity Campaign, Cybersecurity Discipline Implementation Plan, and Cybersecurity Scorecard are critical to achieving the strategic goal of defending DoD information networks, securing DoD data, and mitigating risks to DoD missions as set forth in the 2015 DoD Cyber Strategy. As part of the DoD Cybersecurity Campaign, I have asked my staff to clarify where the Department must have "zero tolerance" for failure to implement these

basic disciplines, and to prioritize our efforts so we collectively focus on doing the most important things first. The Cybersecurity Discipline Implementation Plan lists the four identified “most exploited” basic disciplines, establishes the priorities for correcting these deficiencies, and directs compliance reporting to responsible commanders as well as the Secretary of Defense and Deputy Secretary on a monthly basis. This includes things like configuring all computers to the DoD security standard; ensuring that every computer is defended by an operational organization and that nothing in our enormous, global infrastructure has fallen through the operational cracks; and eliminating the use of passwords by all systems administrators, and replacing these passwords with the cryptographic identity credentials issued by the DoD Public Key Infrastructure. This list became the Cybersecurity Discipline Implementation Plan.

An important measurement of maintaining the Department’s cyber defenses is the annual FISMA report. DoD’s FY14 Report, which was submitted last March, reflected the Department’s commitment to continuously improving information security and privacy management. Our assessments, along with those of the DoD Senior Official for Privacy, reflect areas in which the Department has shown improvements when measured by the OMB metrics.

Joint Regional Security Stacks (JRSS)

Our top priority at DoD CIO is implementing the Joint Regional Security Stacks, which is the first or foundational phase of the Department’s Joint Information Environment (JIE). Today, the Department has numerous disparate security suites facilitated by separate, individualized, localized Service and Agency systems, and thousands of firewalls that must be configured the same way. This is expensive and difficult to secure. Weak configuration management can cause Denials of Service to ourselves when fielding new capabilities or making major changes to the network. The pace of the ever-changing threat will drive JRSS to remain fluid as technology and the adversary mature. Transitioning to the regionally based, centrally managed suite of security appliances known as JRSS will simplify and secure this environment while simultaneously reducing the number of internal and mission owner access points. JRSS goals are to reduce costs, improve configuration management, increase our cyber situational awareness, and enhance functionality across our networks. In particular, JRSS will be the baseline for a more coherent, singular security architecture for our cyber defenders. It will normalize security for data and networks across the Services, and consolidate the Department’s security posture across its

infrastructure. Critically, it will also improve overall cyber situational awareness by enabling better data integrity and creating a common operating picture of the cyber environment, as well as improving the capacity for immediate action and predictive planning. The Deputy Director of CYBERCOM, Lt. Gen. James McLaughlin, has said that achieving cybersecurity will require visibility across all of our networks, and JRSS is critical to accomplishing this visibility.

As JRSS is our top priority at the DoD CIO, we are making progress on its implementation. Despite each Service being at a different stage of technology (driven by unique mission requirements), our plan is to have the security stacks fully operational by the end of FY17. In addition, we are focused on how we securely, reliably, and affordably share information with external partners. Our second priority is focused on appropriately facilitating safe information sharing with our mission partners.

IT Acquisition and Government/Industry Partnerships

As I mentioned earlier, we are working with industry and international partners on our cyber guidelines and improving our cyber alignment with industry. Well beyond cloud security, the Internet of Things presents new dimensions for our cyber threat environment, and USD(AT&L) Frank Kendall is also updating the Department's acquisition guidelines to accommodate the cyber threat to our weapons systems. This threat of cyberattack to our weapons systems is incredibly serious, and we are taking very aggressive action to counter those threats. Aligning to industry environment, when appropriate, will decrease costs, increase the speed to deployment, and offer potentially insightful and tested solutions. In this business process research, we are also evaluating the values of public/private networks; commercial networks garner the benefits of physical security within DoD facilities. We are producing a guidebook to help program managers balance the costs and risks with new weapons programs, and help make them more secure, and we are also issuing new acquisitions rules. Our goal is to have a completely unclassified acquisition guidebook and acquisition rules released later this year. I'm confident these guidebook and rules will help industry help us secure our weapons systems from cyberattack. This too will help raise the defensive basics of cybersecurity and the broader understanding of the threat environment. In addition, USD(AT&L)'s recent release of Better Buying Power 3.0 (BBP 3.0) supports the Department's commitment to continuous

improvements in the defense acquisition system, focusing attention on the overriding concern that our nation's technological superiority is at risk.

Beyond sharing with industry, we collaborate broadly with specific industry sectors to raise the national level of cybersecurity, as applicable to the Department's specific areas of focus. I'd like to mention specifically our Defense Industrial Base Cybersecurity / Information Assurance program as well as our Supply Chain Risk Management efforts. Initiated in 2007 and established as a permanent DoD program in 2013, the DIB CS/IA program improves the capabilities of the more than 100 participating cleared defense contractors to safeguard DoD information that resides on, or transits, Defense Industrial Base information systems. These participating member companies include groups from industries like aerospace, cybersecurity and IT solutions, geospatial, engineering, and transportation. This voluntary public-private partnership enables the Department and these participating companies to share unclassified and classified cyber threat information with each other. This allows them to identify and respond to adversary activity through the program's operational focal point, the DoD Cyber Crime Center.

In addition to closely sharing cybersecurity information with other defense contractors, we consider our Supply Chain Risk Management (SCRM) efforts to be a model for partnerships across government and industry. Our SCRM efforts truly are a best practice example of intergovernmental collaboration. SCRM is a multi-disciplinary challenge that requires contributions and collaborations among many disciplines, including systems engineering, system security engineering, information security, software development, and others. DoD has been working closely with the intergovernmental partners for years to improve U.S. Government SCRM capabilities for trusted systems and National Security Systems. This important work continues today with these partners and others, like the White House Office of Science and Technology Policy and the National Science Foundation. Through reaching out to industry and constantly seeking new ways to capitalize on the joint intellectual capital such as employee exchange programs, we are working to raise the national level of cybersecurity across DoD, our industrial partners and the nation. The cyber threat has no geographic boundaries and is rapidly evolving to affect every aspect of our business. Being able to take advantage of state of the art innovation across government and industry is critical to our ability to address this threat. As well as pushing forward hard on our new efforts to raise the defensive basics of cybersecurity, we

need to take every opportunity to partner with industry as we tackle this daunting challenge together.

Conclusion

Thank you for the opportunity to testify before you today. I look forward to your questions.

Mr. HURD. Thank you, sir.

Director Melvin, you are now recognized for 5 minutes.

STATEMENT OF VALERIE C. MELVIN

Ms. MELVIN. Chairman Hurd and Coffman, Ranking Members Kelly and Kuster, and members of subcommittees, thank you for inviting me to this important discussion of VA's and DOD's progress toward developing interoperable electronic health records. We have been reviewing the Department's initiatives for many years, and this past August, as you mentioned, issued a report on their efforts to plan for and measure progress toward achieving interoperability. My remarks this afternoon summarize our findings from that report.

As you've stressed, VA and DOD have been undertaking initiatives to exchange health information and increase interoperability for almost two decades. Among others, these have included initiatives to share viewable health data in their existing systems and link and share computable data between their repositories.

As you've stated, the Department also took steps toward developing a single joint system and approach aimed at sidestepping challenges to achieving interoperability between their separate systems. However, while increased data sharing has occurred in various ways, the Departments did not follow through with developing a single system, and persistent management challenges over the years have hindered progress and elevated the uncertainty about when and how fully interoperable capabilities will be achieved.

With this uncertainty, the National Defense Authorization Act for fiscal year 2014 established the two deadlines for VA and DOD to first ensure that all their health data complied with national standards and with computable and realtime by October 1, 2014, and second, to deploy, modernize, and fully interoperable electronic health records by December 2016. In response, the Departments mapped selected health data in their existing systems to national standards and began planning and working toward their implementation of separate modernization system—modernized systems.

However, of significant concern is that the Departments have not identified outcome-oriented goals and metrics to clearly define what they aim to achieve from their interoperability efforts and the results and benefits anticipated.

Such metrics can help in assessing the progress of the Department's efforts, identifying areas that need attention, and ensuring accountability for end results such as improved quality of care for veterans and servicemembers.

Further, the Department's most recent decision to pursue separate interoperable systems rather than a single joint system adds to our concern. Taking separate paths to modernize their systems increases the risk that there will not be the effective collaboration and coordination needed to establish and convey a joint position on what fully interoperable capabilities will look like and how and when they will be achieved.

Over the long history of the Department's efforts, reaching such a state of clarity has been elusive and is further evidence of the need for outcome-oriented goals and metrics to help gauge and encourage progress on this latest effort.

DOD and VA agreed with our recommendation that they develop such measures, and we look forward to following their actions to do so. Nevertheless, the Department's longstanding attempts to achieve interoperable electronic health records is an example of the larger problem with ineffective management of IT projects across the Federal Government as we have highlighted in our 2015 high-risk update.

The history of these Departments' efforts also highlights the importance of continued congressional oversight as you are providing by holding this hearing today. VA and DOD must now do their part to more efficiently and effectively bring this challenging endeavor to a successful outcome. Recommendations that we and others have made, along with the important IT acquisition reform provisions outlined in FITARA, should give the Departments a more clear basis for demonstrating further success. This concludes my oral statement, and I would be pleased to respond to your questions.

[Prepared statement of Ms. Melvin follows:]



United States Government Accountability Office

Testimony

Before the Subcommittee on Information Technology, Committee on Oversight and Government Reform and the Subcommittee on Oversight and Investigations, Committee on Veterans' Affairs, House of Representatives

For Release on Delivery
Expected at 2:00 p.m. ET
Tuesday, October 27, 2015

ELECTRONIC HEALTH RECORDS

VA and DOD Need to Establish Goals and Metrics for Their Interoperability Efforts

Statement of Valerie C. Melvin, Director
Information Technology

GAO Highlights

Highlights of GAO-16-184T, a testimony before the Subcommittee on Information Technology, Committee on Oversight and Government Reform and the Subcommittee on Oversight and Investigations, Committee on Veterans' Affairs, House of Representatives

Why GAO Did This Study

VA and DOD operate two of the nation's largest health care systems, serving millions of veterans and active duty members and their beneficiaries. For almost two decades the departments have undertaken various efforts to advance interoperability between their respective electronic health record systems. While the departments have made progress, these initiatives have also faced significant management challenges. Among their recent initiatives, the secretaries of the two departments committed to establishing interoperability between their separate electronic health record systems, which they are working to modernize.

This statement summarizes GAO's August 2015 report (GAO-15-530) on VA and DOD's efforts to achieve interoperability between their health records systems.

What GAO Recommends

In its August 2015 report, GAO recommended that VA and DOD, working with the IPO, establish a time frame for identifying outcome-oriented metrics, define goals to provide a basis for assessing and reporting on the status of interoperability, and update the IPO's guidance accordingly. The departments concurred with GAO's recommendations.

View GAO-16-184T. For more information, contact Valene C. Melvin at (202) 512-6304 or melvin@gao.gov.

October 27, 2015

ELECTRONIC HEALTH RECORDS

VA and DOD Need to Establish Goals and Metrics for Their Interoperability Efforts

What GAO Found

As GAO reported in August 2015, the Departments of Veterans Affairs (VA) and Defense (DOD), with guidance from the Interagency Program Office (IPO) tasked with facilitating the departments' efforts to share health information, have taken actions to increase interoperability between their existing electronic health record systems. These actions have included work on near-term objectives such as standardizing certain health data and making them viewable by clinicians in both departments in an integrated format. The departments also developed plans for their longer-term initiatives to modernize their respective electronic health record systems. In accordance with its responsibilities, the IPO issued guidance outlining the technical approach for achieving interoperability between the departments' systems.

Having taken these actions, however, the departments did not, by the October 1, 2014, deadline established in the *National Defense Authorization Act (NDAA) for Fiscal Year 2014* for compliance with national standards, certify that all health care data in their systems complied with national data standards and were computable in real time. Moreover, the departments do not plan to complete the modernization of their electronic health record systems until well after the December 2016 statutory deadline by which they are to deploy modernized electronic health record software while ensuring full interoperability. Specifically, VA plans to modernize its existing system, while DOD plans to acquire a new system; but their plans indicate that deployment of the new systems with interoperable capabilities will not be complete until after 2018.

Consistent with its responsibilities, the IPO took steps to begin developing metrics to monitor progress related to the standardization of the departments' data and their exchange of health information. For example, it called for the development of tracking metrics to gauge the percentage of data domains within the departments' current systems that have been mapped to national standards. However, the office had not defined outcome-oriented metrics and related goals to measure the effectiveness of interoperability efforts in terms of improving health care services for patients served by both departments. IPO officials said that work was ongoing to develop more meaningful measures of progress, but the office had not established a time frame for completing this work or incorporating the outcome metrics and associated goals into its guidance. GAO concluded that without defining outcome-oriented metrics and related goals and incorporating them into their current approach, the departments and the IPO will not be in a position to effectively assess their progress toward further achieving interoperability and identifying the benefits that their efforts yield.

Chairmen Hurd and Coffman, Ranking Members Kelly and Kuster, and Members of the Subcommittees:

Thank you for inviting me to testify at today's hearing on the Department of Veterans Affairs' (VA) and the Department of Defense's (DOD) progress toward developing interoperable electronic health records. As you know, these departments operate two of the nation's largest health care systems, serving millions of veterans, active duty service members, and their beneficiaries. For nearly two decades, the departments have been working on efforts to better share data in their health care systems and make patient information more readily available to health care providers. Yet, while the departments have undertaken numerous initiatives, they have faced significant challenges and their progress has been slow.

In August 2015, we issued a report summarizing the findings from our most recent review of VA's and DOD's electronic health record efforts.¹ The objective of that review was to evaluate the actions taken by the departments, and the Interagency Program Office (IPO) tasked with facilitating their efforts, to plan for and measure progress toward achieving interoperability between the VA and DOD electronic health record systems. My statement today summarizes the findings of our report.

For the August 2015 report, we obtained and reviewed relevant program documentation, such as the IPO *Health Data Interoperability Management Plan*, to identify planned metrics tracked and reported by the IPO. In addition, we reviewed reports, such as the IPO Executive Committee quarterly reports and the DOD/VA quarterly data sharing reports to Congress, to determine if metrics and goals related to interoperability were consistent with GAO guidance that discussed

¹GAO, *Electronic Health Records: Outcome-Oriented Metrics and Goals Needed to Gauge DOD's and VA's Progress in Achieving Interoperability*, GAO-15-530 (Washington, D.C.: Aug. 13, 2015).

process and outcome metrics used for performance measurement.² Further, we interviewed cognizant officials, such as the IPO Acting Director, Deputy Director, and other VA and DOD program officials to understand efforts related to improving interoperability between the departments. The report on which this testimony is based includes a more detailed discussion of the scope and methodology for our review.

The work on which this testimony is based was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Historically, patient health information has been scattered across paper records kept by different caregivers in many different locations. Thus, the move toward collecting, storing, retrieving, and transferring these records electronically can significantly improve the quality and efficiency of care. This is especially true in the case of military personnel and veterans, because they tend to be highly mobile and may have health records at multiple facilities both within and outside the United States.

Interoperability allows patients' electronic health information to be available from provider to provider, regardless of where it originated. Achieving this depends on, among other things, the use of agreed-upon health data standards (e.g., standardized language for prescriptions and laboratory testing) and the ability of systems to use the information that is exchanged.

Currently, both VA and DOD operate separate electronic systems to create and manage electronic health records. VA uses its Veterans Health Information Systems and Technology Architecture (Vista), a

²GAO, *Electronic Health Record Programs: Participation Has Increased, but Action Needed to Achieve Goals, Including Improved Quality of Care*, GAO-14-207 (Washington, D.C.: March 6, 2014); *Designing Evaluations: 2012 Revision*, GAO-12-208G (Washington, D.C.: Jan. 31, 2012); *Performance Measurement and Evaluation: Definitions and Relationships*, GAO-11-646SP (Washington, D.C.: May 2, 2011); and *Executive Guide: Effectively Implementing the Government Performance and Results Act*, GAO/IGD-96-118 (Washington, D.C.: June 1, 1996).

system that the department developed in-house and that consists of 104 separate computer applications; while DOD uses the Armed Forces Health Longitudinal Technology Application (AHLTA), which consists of multiple legacy medical information systems developed from customized commercial software applications.

A Long History of Efforts to Achieve Electronic Health Record Interoperability

Since 1998, VA and DOD have undertaken a patchwork of initiatives intended to allow their health information systems to exchange information and increase interoperability. Among others, these have included initiatives to share viewable data in existing (legacy) systems, link and share computable data between the departments' updated health data repositories, and jointly develop a single integrated system. Table 1 below summarizes a number of the departments' key efforts.

Table 1: History of the Departments of Veterans Affairs and Defense's Electronic Health Record Interoperability Initiatives

Initiative	Year begun	Description
Government Computer-Based Patient Record	1998	This interface was expected to compile requested patient health information in a temporary, "virtual" record that could be displayed on a user's computer screen.
Federal Health Information Exchange	2002	The Government Computer-Based Patient Record initiative was narrowed in scope to focus on enabling the Department of Defense (DOD) to electronically transfer service members' health information to the Department of Veterans Affairs (VA) upon their separation from active duty. The resulting initiative, completed in 2004, was renamed the Federal Health Information Exchange and is still used by the departments to transfer data from DOD to VA.
Bidirectional Health Information Exchange	2004	This provides clinicians at both departments with viewable access to records on shared patients. It is still used by the departments to view data from both DOD and VA.
Clinical Data Repository/Health Data Repository Initiative	2004	This interface links DOD's Clinical Data Repository and VA's Health Data Repository to achieve two-way exchange of health information.
Virtual Lifetime Electronic Record	2009	To streamline the transition of electronic medical, benefits, and administrative information between the departments, this initiative enabled access to electronic records for service members as they transition from military to veteran status and throughout their lives. It also expands the departments' health information-sharing capabilities by enabling access to private-sector health data.

Initiative	Year begun	Description
Joint Federal Health Care Center	2010	The Captain James A. Lovell Federal Health Care Center was a 5-year demonstration project to integrate DOD and VA facilities in the North Chicago, Illinois, area. It is the first integrated federal health care center for use by beneficiaries of both departments, with an integrated DOD-VA workforce, a joint funding source, and a single line of governance.

Source: GAO summary of prior work and department documentation | GAO-16-184T.

In addition to the initiatives mentioned in table 1, the departments took a variety of actions to respond to provisions in the *National Defense Authorization Act (NDAA) for Fiscal Year 2008*,³ which required them to jointly develop and implement fully interoperable electronic health record systems or capabilities in 2009. The act also directed them to set up an interagency program office (referred to as the IPO) to serve as a single point of accountability for these efforts.

Department officials stated that their previous initiatives, along with meeting six interoperability objectives established by their Interagency Clinical Informatics Board, had enabled them to meet the deadline for full interoperability established by the act. However, we previously identified a number of challenges that the departments faced in managing their efforts in response to the act and to address their common health IT needs.⁴ In particular, although these initiatives have helped to increase data-sharing in various ways, they have been plagued by persistent management challenges that have hampered progress toward fully interoperable electronic health record capabilities.

In March 2011, the secretaries of the two departments announced that they would develop a new, joint integrated electronic health record system (referred to as iEHR). This was intended to replace the departments' separate systems with a single common system, thus sidestepping many of the challenges they had previously encountered in

³Pub. L. No. 110-181, § 1635, 122 Stat. 3, 460-463 (2008).

⁴GAO, *Electronic Health Records: DOD and VA Should Remove Barriers and Improve Efforts to Meet Their Common System Needs*, GAO-11-265 (Washington, D.C.: Feb. 2, 2011); *Electronic Health Records: DOD and VA Efforts to Achieve Full Interoperability Are Ongoing; Program Office Management Needs Improvement*, GAO-09-775 (Washington, D.C.: July 28, 2009); and *Electronic Health Records: DOD's and VA's Sharing of Information Could Benefit from Improved Management*, GAO-09-268 (Washington, D.C.: Jan. 28, 2009).

trying to achieve interoperability. However, in February 2013, about 2 years after initiating iEHR, the secretaries announced that the departments were abandoning plans to develop a joint system, due to concerns about the program's cost, schedule, and ability to meet deadlines. The IPO reported spending about \$564 million on iEHR between October 2011 and June 2013.

In place of the iEHR initiative, VA stated that it would modernize VistA, while DOD planned to buy a commercially available system to replace AHLTA. The departments stated that they would ensure interoperability between these updated systems, as well as with other public and private health care providers. In December 2013, the IPO was re-chartered and given responsibility for establishing technical and clinical standards and processes to ensure that health data between the two departments (and other providers) are integrated.

We issued several prior reports regarding this approach, in which we noted that the departments did not substantiate their claims that it would be less expensive and faster than developing a single, joint system. We also noted that the departments' plans to modernize their two separate systems were duplicative and stressed that their decisions should be justified by comparing the costs and schedules of alternate approaches.⁵ We therefore previously recommended that the departments develop cost and schedule estimates that would include all elements of their approach (i.e., modernizing both departments' health information systems and establishing interoperability between them) and compare them with estimates of the cost and schedule for the single-system approach. If the planned approach was projected to cost more or take longer, we recommended that they provide a rationale for pursuing such an approach.

VA and DOD agreed with our prior recommendations and stated that initial comparison indicated that the current approach would be more cost effective. However, as of October 2015, the departments have not

⁵GAO, *Electronic Health Records: VA and DOD Need to Support Cost and Schedule Claims, Develop Interoperability Plans, and Improve Collaboration*, GAO-14-302 (Washington, D.C.: Feb. 27, 2014). See also GAO, *2014 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Other Financial Benefits*, GAO-14-343SP (Washington, D.C.: Apr. 8, 2014), and *2015 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Other Financial Benefits*, GAO-15-404SP (Washington, D.C.: Apr. 14, 2015).

provided us with a comparison of the estimated costs of their current and previous approaches. On the other hand, with respect to their assertions that separate systems could be achieved faster, both departments have developed schedules that indicate their separate modernizations are not expected to be completed until after the 2017 planned completion date for the previous single system approach.

In light of the departments' not having yet implemented a solution that allows for seamless electronic sharing of health care data, the *National Defense Authorization Act (NDAA) for Fiscal Year 2014*⁶ included requirements pertaining to the implementation, design, and planning for interoperability between VA's and DOD's electronic health record systems. Among other actions, provisions in the act directed each department to (1) ensure that all health care data contained in their systems (VA's VistA and DOD's AHLTA) complied with national standards and were computable in real time by October 1, 2014, and (2) deploy modernized electronic health record software to support clinicians while ensuring full standards-based interoperability by December 31, 2016.

Interoperability Efforts Continue, but DOD and VA Need to Develop Goals and Metrics for Assessing Their Progress

Our August 2015 report noted that the departments have engaged in several near-term efforts focused on expanding interoperability between their existing electronic health record systems. For example, the departments analyzed data related to 25 "domains" identified by the Interagency Clinical Informatics Board and mapped health data in their existing systems to standards identified by the IPO. The departments also expanded the functionality of their Joint Legacy Viewer—a tool that allows clinicians to view certain health care data from both departments in a single interface.

In addition, VA and DOD have both moved forward with plans to modernize their respective electronic health record systems. VA has developed a number of plans for its VistA modernization effort (known as VistA Evolution), including an interoperability plan and a road map describing functional capabilities to be deployed through fiscal year 2018. According to the road map, the first set of capabilities was to be delivered

⁶Pub. L. No. 113-66, Div. A, Title VII, § 713, 127 Stat. 672, 794-798 (Dec. 26, 2013).

in September 2014, and was to include access to the Joint Legacy Viewer, among other things.

For its part, DOD issued a request for proposals and developed a series of planning documents for its systems modernization effort (referred to as the Defense Healthcare Management System Modernization (DHMSM) program). Further, the department announced that the DHMSM contract was awarded on July 29, 2015, and that it plans for the new system to reach initial operating capability by December 2016.

The IPO has also taken actions to facilitate departmental interoperability efforts. These included developing technical guidance that details how VA and DOD systems are to exchange information consistent with national and international standards. The office also developed a joint interoperability plan, which summarizes the departments' actions in this area, and a health data interoperability management plan, which outlines a high-level approach and roles and responsibilities for achieving health data exchange and terminology standardization.

While these are important steps toward greater interoperability, VA and DOD nonetheless did not, by the October 1, 2014, deadline established by the 2014 National Defense Authorization Act for compliance with national data standards, certify that all health care data in their systems complied with national standards and were computable in real time.

Additionally, the departments acknowledged that they do not expect to complete a number of key activities related to their electronic health record system efforts until sometime after the December 31, 2016, statutory deadline for deploying modernized electronic health record software with interoperability. Specifically, deployment of VA's modernized VistA system at all locations and for all users is not planned until 2018. Meanwhile, DOD has yet to define all the additional work that will be necessary beyond 2016 to fully deploy the DHMSM system, and full operational capability is not planned to occur until the end of fiscal year 2022. Thus, for the departments, establishing modernized and fully interoperable health record systems is still years away.

A significant concern is that VA and DOD had not identified outcome-oriented goals and metrics that would more clearly define what they aim to achieve from their interoperability efforts and the value and benefits

these efforts are intended to yield. As we have stressed in prior work and guidance,⁷ assessing the performance of a program should include measuring its outcomes in terms of the results of products or services. In this case, such outcomes could include improvements in the quality of health care or clinician satisfaction. Establishing outcome-oriented goals and metrics is essential to determining whether a program is delivering value.

The IPO is responsible for monitoring and reporting on the departments' progress in achieving interoperability and coordinating with VA and DOD to ensure that these efforts enhance health care services. Toward this end, the office issued guidance that identified a variety of process-oriented metrics to track, for example, the percentage of data domains that have been mapped to national standards. The guidance also identified metrics to be reported that relate to tracking the amount of certain types of data being exchanged between the departments' existing initiatives, such as laboratory reports exchanged from DOD to VA through the Federal Health Information Exchange and patient queries submitted by providers through the Bidirectional Health Information Exchange.

Nevertheless, as we reported in August 2015, the IPO had yet to specify outcome-oriented metrics and goals that would gauge the impact interoperable health record capabilities will have on the departments' health care services. The acting director of the IPO stated that the office was working to identify metrics that would be more meaningful, such as metrics on the quality of a user's experience or improvements in health outcomes. However, the IPO had not established a time-frame for completing such metrics and incorporating them into the office's guidance.

In our August 2015 report, we stressed that using an effective outcome-based approach could provide DOD and VA with a more accurate picture of their progress toward achieving interoperability and the value and

⁷GAO, *Electronic Health Record Programs: Participation Has Increased, but Action Needed to Achieve Goals, Including Improved Quality of Care*, GAO-14-207 (Washington, D.C.: March 6, 2014); *Designing Evaluations: 2012 Revision*, GAO-12-208G (Washington, D.C.: Jan. 31, 2012); *Performance Measurement and Evaluation: Definitions and Relationships*, GAO-11-646SP (Washington, D.C.: May 2, 2011); and *Executive Guide: Effectively Implementing the Government Performance and Results Act*, GAO/GGD-96-118 (Washington, D.C.: June 1, 1996).

benefits generated. Accordingly, we recommended that the departments, working with the IPO, establish a time frame for identifying outcome-oriented metrics, define related goals as a basis for determining the extent to which the departments' modernized electronic health records systems are achieving interoperability, and update IPO guidance accordingly. Both departments concurred with our recommendations.

In conclusion, VA and DOD are continuing to pursue their nearly 2 decades-long effort to establish interoperability between their electronic health records systems. Yet while the departments' various initiatives over the years have increased the amount of patient health data exchanged by the departments and made accessible to providers, these efforts have been beset by persistent management challenges and uncertainty about the extent to which fully interoperable capabilities will be achieved and when. The 2013 decision to pursue separate modernizations, rather than a single, joint system, indicates that achieving interoperability will be an ongoing concern for years to come. Moreover, it has once again highlighted the criticality of these departments needing to define what they aim to accomplish through these efforts, and identify meaningful outcome-oriented goals and metrics that indicate not only the extent to which progress is being made toward achieving full interoperability, but also the measures to which they will be held accountable. As we stressed in our report, establishing measurable goals for improving the care that VA and DOD provide to the millions of service members, veterans, and their beneficiaries is essential to more effectively position the departments to do so.

Chairmen Hurd and Coffman, Ranking Members Kelly and Kuster, and Members of the Subcommittees, this concludes my prepared statement. I would be pleased to respond to any questions that you may have.

Contact and Acknowledgments

If you or your staffs have any questions about this statement, please contact Valerie C. Melvin at (202) 512-6304 or melvinv@gao.gov. Additional staff who made key contributions to this statement include Mark T. Bird (assistant director), Lee McCracken, Jacqueline Mai, Scott Pettis, and Jennifer Stavros-Turner.

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

GAO's Mission	The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.
Obtaining Copies of GAO Reports and Testimony	The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (http://www.gao.gov). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to http://www.gao.gov and select "E-mail Updates."
Order by Phone	The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, http://www.gao.gov/ordering.htm. Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537. Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.
Connect with GAO	Connect with GAO on Facebook, Flickr, Twitter, and YouTube. Subscribe to our RSS Feeds or E-mail Updates. Listen to our Podcasts and read The Watchblog. Visit GAO on the web at www.gao.gov.
To Report Fraud, Waste, and Abuse in Federal Programs	Contact: Website: http://www.gao.gov/fraudnet/fraudnet.htm E-mail: fraudnet@gao.gov Automated answering system: (800) 424-5454 or (202) 512-7470
Congressional Relations	Katherine Siggerud, Managing Director, siggerudk@gao.gov , (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548
Public Affairs	Chuck Young, Managing Director, youngc1@gao.gov , (202) 512-4800, U.S. Government Accountability Office, 441 G Street NW, Room 7149, Washington, DC 20548



Please Print on Recycled Paper.

GAO Highlights

Highlights of GAO-16-184T, a testimony before the Subcommittee on Information Technology, Committee on Oversight and Government Reform and the Subcommittee on Oversight and Investigations, Committee on Veterans' Affairs, House of Representatives

Why GAO Did This Study

VA and DOD operate two of the nation's largest health care systems, serving millions of veterans and active duty members and their beneficiaries. For almost two decades the departments have undertaken various efforts to advance interoperability between their respective electronic health record systems. While the departments have made progress, these initiatives have also faced significant management challenges. Among their recent initiatives, the secretaries of the two departments committed to establishing interoperability between their separate electronic health record systems, which they are working to modernize.

This statement summarizes GAO's August 2015 report (GAO-15-530) on VA and DOD's efforts to achieve interoperability between their health records systems.

What GAO Recommends

In its August 2015 report, GAO recommended that VA and DOD, working with the IPO, establish a time frame for identifying outcome-oriented metrics, define goals to provide a basis for assessing and reporting on the status of interoperability, and update the IPO's guidance accordingly. The departments concurred with GAO's recommendations.

View GAO-16-184T. For more information, contact Valerie C. Melvin at (202) 512-6304 or melvinv@gao.gov.

October 27, 2015

ELECTRONIC HEALTH RECORDS

VA and DOD Need to Establish Goals and Metrics for Their Interoperability Efforts

What GAO Found

As GAO reported in August 2015, the Departments of Veterans Affairs (VA) and Defense (DOD), with guidance from the Interagency Program Office (IPO) tasked with facilitating the departments' efforts to share health information, have taken actions to increase interoperability between their existing electronic health record systems. These actions have included work on near-term objectives such as standardizing certain health data and making them viewable by clinicians in both departments in an integrated format. The departments also developed plans for their longer-term initiatives to modernize their respective electronic health record systems. In accordance with its responsibilities, the IPO issued guidance outlining the technical approach for achieving interoperability between the departments' systems.

Having taken these actions, however, the departments did not, by the October 1, 2014, deadline established in the *National Defense Authorization Act (NDAA) for Fiscal Year 2014* for compliance with national standards, certify that all health care data in their systems complied with national data standards and were computable in real time. Moreover, the departments do not plan to complete the modernization of their electronic health record systems until well after the December 2016 statutory deadline by which they are to deploy modernized electronic health record software while ensuring full interoperability. Specifically, VA plans to modernize its existing system, while DOD plans to acquire a new system; but their plans indicate that deployment of the new systems with interoperable capabilities will not be complete until after 2018.

Consistent with its responsibilities, the IPO took steps to begin developing metrics to monitor progress related to the standardization of the departments' data and their exchange of health information. For example, it called for the development of tracking metrics to gauge the percentage of data domains within the departments' current systems that have been mapped to national standards. However, the office had not defined outcome-oriented metrics and related goals to measure the effectiveness of interoperability efforts in terms of improving health care services for patients served by both departments. IPO officials said that work was ongoing to develop more meaningful measures of progress, but the office had not established a time frame for completing this work or incorporating the outcome metrics and associated goals into its guidance. GAO concluded that without defining outcome-oriented metrics and related goals and incorporating them into their current approach, the departments and the IPO will not be in a position to effectively assess their progress toward further achieving interoperability and identifying the benefits that their efforts yield.

Mr. COFFMAN. [presiding.] All right. Thank you, Ms. Melvin. I'll begin with questions.

Ms. Council, as required by the NDAA of 2014, all VistA data was to be in a compliant format established by the Office of the National Coordinator for Health Information Technology, or the ONC, but VA stated it would not certify until later in 2015. Has VA certified its compliance to the standard?

Ms. COUNCIL. You want to take that, Brian?

Mr. BURNS. Yeah.

Mr. COFFMAN. Mr. Burns

Ms. COUNCIL. Yes, I'll have Mr. Brian respond because I want to make sure we're precise on this answer.

Mr. COFFMAN. Okay.

Mr. BURNS. At this point, we have not certified to the 2014 requirement, the October 1, 2014, requirement. The approach we took is we identified 25 domains. From those 25 domains, we prioritized those. The first seven we looked at were the most frequently used, the most high volume, and what we consider the most relevant terms. Those we did do data mapping to, and then we continued to map from there, and we're still continuing to do that process

As we go forward, we also do updates to each one of those respective domains to make sure that any additional terms that come in are also mapped. Those then are used in data maps that go into the capability of sharing the information with JLV. So, at this point, we have data maps for most of the sets. We have partial mapping for most of the sets at this point

Mr. COFFMAN. Okay. Mr. Miller, nearly 6 years after a 2010 GAO report discussed the need for VA and DOD to address unstructured data, what has the IPO done to accomplish the interoperability of unstructured data or the development of a national standard?

Mr. MILLER. Sir, I would offer a couple of things, sir. We do have a dedicated IPO, Dr. Lauren Thompson. She reported in on the board in May. For sometime I was wearing two hats. I'm no longer wearing two hats. I think that's reflective of our commitment to the IPO and the work that they do.

With regards to national standards, you heard in my opening comments, our strategy has been to partner with the Office of National Coordinator for Health IT in identifying those areas and what standards we need to have and to leverage things like ONC certification and then to bring those forward between the two Departments and let's determine jointly what those standards needs to be and then promulgate those back out to both Departments.

I think you will see on both the DOD and the VA, those standards are incorporated. If you were to go look inside the DOD's acquisition program, you would see where those were required as part of our modernization. They are part of our technical package. Those things are currently flowing back to both Departments.

The IPO is basically responsible for working between the two Departments, providing technical leadership to make sure that those standards apply, and then—and bringing things back to the Office of National Coordinator where we need refined standards and improvements in standard.

Just recently, the IPO took a very strong leadership role in looking at things like the CCVA document, which is a consolidated document that provides the transition of care within the commercial side that DOD and VA are both using as part of our exchange with our commercial providers, and so those are the kinds of activities where the IPO is taking strong technical leadership and helping us understand what the appropriate national standards are.

I think, as everybody's highlighted today, the national standards piece is much bigger than its DOD and VA, and we need to have a strong collaboration with the leadership of HHS.

Mr. COFFMAN. Ms. Melvin, in February 2014, GAO reported that VA and DOD failed to correctly implement the IPO and further noted the diminished role the IPO plays between VA and DOD. Considering this finding, what purpose does the IPO serve in its current state, and similarly, is there a need for the IPO at all?

Ms. MELVIN. I would like to start by saying that the IPO was established by the National Defense Authorization Act for 2008, so it has a specific function in statute to be the single point of accountability for VA and DOD achieving the electronic health record.

Several of our reports, in fact, have noted that the position of the office has not been specific to or as connected to the overall function for which it was assigned. We have seen it having a limited role in the Department's current efforts over time. It's been what I would describe as more of an evolving role, and it's one that it is reasonable that one would question its current responsibilities and whether it should exist.

Having said that, the IPO is currently responsible for developing the national standards or at least identifying the national standards that VA and DOD ought to adhere to, so they do have an important function. I think the important thing about it is it must be clear what the role of that office is going to be. If it's not going to be at the level of a role of authority, a single accountability office for authority, then it is important for the agencies and for Congress to determine what their role should be.

Mr. COFFMAN. Thank you. Ms. Kelly, you are now recognized for 5 minutes.

Ms. KELLY. Thank you, Mr. Chair.

Mr. Miller, why is it important that your Department first ensure that all healthcare data comply with national standards?

Mr. MILLER. Because, ma'am, as we've highlighted today, our care is provided in a number of different settings. In the case of DOD, more than 60 percent of our care is provided out in the market through our TRICARE contracts, and the way that we get the ability to really share and use information is by adopting these national standards.

And I think it's important that we all recognize that both DOD and VA were well ahead of where the larger national effort was that started really in the HITECH Act in 2008, 2009, and so part of our struggle has been taking a lot of legacy data that we were leaders in and then working towards and getting on board with these national standards that have fairly rapidly evolved over the past few years as part of our EHR adoption.

But simply put, ma'am, DOD generates veterans. Those veterans need to have seamless care no matter where they go, and the way

that we make sure that there is a common meaning and common understanding of that information is by all of us agreeing at the national level to what those standards are. The challenge is there's a lot of them, and the other challenge is that we all have to agree at a little bit lower level than just adopting a top level standard. There have to be some lower level agreement about what we mean with certain standards, and so again, that reinforces where the IPO fits, because the IPO provides a critical linkage between our 2 Departments and the Office of National Coordinator because we provide a lot of feedback.

We do believe we can be on the leading edge in many of these efforts, and it's that IPO function that really provides the strong leadership role to make sure that we implement the national standards correctly, ma'am.

Ms. KELLY. Well, Mr. Miller and Ms. Council, can you tell me when your respective Departments will be able to certified that the data complies with national standards? When's your goal? What are you looking at?

Mr. MILLER. So ma'am, I'll state from DOD, I just reviewed our letter for certification. I do want to highlight one of the reasons why DOD is a little bit late here is that the NDAA, which I have a copy of, if you really want to look at it, it refers only to DOD's AHLTA data. AHLTA data is our outpatient data, and the reason why I want to make a second and explain this is, when we met with our functionals—and I'm here to tell you, I don't measure success for DOD. I measure success by what our users say, and so when we started down this journey to do this data mapping and understand what they wanted to be able to access in an integrated view, as the NDAA required, they came back and said it's much more than your outpatient data. It's your inpatient data. It's your data from the private sector. It's the data from in theater and our theater systems, and so because of that, DOD took the last year to integrate much more than what the NDAA required because I felt like that was the right thing to do.

And so I will defend, you know, the time we took because it is what our functional users really asked for, and so along with making that data available, we also had to work through a series of data maps, and over the last year, we went through four iterative builds. Those builds were reviewed by subject matter experts in the DOD as well as the IPO before we put them in production, and so those things took a little time.

I am here to say that some of this stuff is incredibly complicated. We are dealing with a large number of terms, and it was important that we did this right. The last thing I want to do, as an acquisition person, is put a bad tool in my users hands because they will not like it. They will get turned off from it. And we have been very careful about how we've deployed the things and how we have increased access. And I'm here to tell you today, our results are pretty staggering when you look at the demands and the feedback we're getting for the use of this information.

It is not about JLV. What really JLV provides is a view into the data that's flowing between the two Departments. In the reality what will happen is, is that the VA—any of their systems will use that data, whether it's eHMP, their VistA follow-ons, and they will

use it however it best makes sense within their healthcare setting. The same in DOD.

We are working right now to make you sure that data coming back from VA is provided to our new system as part of our integration and testing over the next year, so thank you, ma'am.

Ms. KELLY. Ms. Council.

Ms. COUNCIL. Yes. As far as our data is concerned and spending some time with the team, certainly we receive the data from DOD, and then we have to map it to the standards to our system. The team says that we should be well on time to certify in 2016, but the veteran—the VA issue around data is much broader than that. A veteran has more than just health data that we're concerned about. It's general, Active Duty, other sets of data that we'll be bringing together.

One of the key factors of our new strategy is starting and establishing a strong data management capability to give us a holistic look at the veteran and be able to interchange and engage with that veteran in a very different way than we do today. So for the VA, our look is not just the health—we will certify that in 2016—but broader so that we can change the veteran's experience by having a holistic look at their information that's important and germane to the benefits, the healthcare, as well as the end care that they receive.

Ms. KELLY. So can you two currently exchange patient health data between one another?

Ms. COUNCIL. We currently do today exchange health information between each other.

Ms. KELLY. You can do that, and do all users have access to interoperable electronic health records system?

Mr. BURNS. At this point, we have, depending on the system, we have users that use the existing system, CPRS. We also, through the viewers, we are adding users on a regular basis. This time last year we had—with JLV, we had 600 users. We now have up to 19,000 users, and we continue to add more users every single week in doing that. That's just one tool.

That said, there's other tools that are accessed to in our Web-based solutions as we move forward and even our follow-on modernization, so we continue to add users on a regular basis. This year also we added VBA, Veterans Benefits Administration, users, which was a significant help to help in getting them to be able to look at the records in addition just from the health standpoint.

Ms. KELLY. Thank you. I'm out of time.

I yield back.

Mr. COFFMAN. Thank you, Ms. Kelly.

Mr. FARENTHOLD of Texas, you are now recognized for 5 minutes.

Mr. FARENTHOLD. Thank you very much, and I'd like to follow up on that a little bit, Mr. Burns, if you will. You say you've added 19,000 users in a viewer. I mean, is that—that really isn't interoperability where everybody can access the data that needs to access the data and doctors can and nurses can input the data. I mean, that's just, okay, I'm able to look at it, right?

Mr. BURNS. With the current—with JLV, it is a viewer, so you're able to look at the data. The one thing that we did add through that is that we have where data is mapped. We can then dem-

onstrate and show the mapping of the data in addition to the original data, so——

Mr. FARENTHOLD. That isn't where I wanted to go, but I wanted——

Mr. BURNS. Okay.

Mr. FARENTHOLD. —to follow up on that question.

Ms. Council, the Secretary of the VA, Mr. McDonald was recently in south Texas and said, you know, one of reasons it was such a slow-paced system is some of legacy systems are still operating in the COBOL programming language, I mean, 1960s technology. You know, it just seems like there's not a focus there.

You spoke a little bit about, you know, making the business case for what products in IT that you work on. You know, can you tell me a little bit what the business case is? To me, the number one focus should not be the business case but should be providing quality service to veterans. I mean, I could make a business case for making veterans wait months for service so we don't have to make more doctors. I mean, what constitutes business case?

Ms. COUNCIL. It really gets to the point that was raised earlier. How do we measure success? How do we know we're actually accomplishing what we said we would accomplish, and how do we know we are spending our time and monies on the right things to enable help for the veteran? So that's what we mean by business case.

Mr. FARENTHOLD. All right. So let's look at what's happening now. There was just a report out today that in San Antonio, just north of the district I represent, that we have the highest wait times since May. We are up to 12,000 veterans waiting over 30 days to get care. That's the worst in the entire VA.

I mean, I thought we were trying to address these wait times. Shouldn't that be—the wait times be one of the top priorities of getting veterans the care that they need in a timely fashion?

Ms. COUNCIL. It certainly should, sir. And at the end of the day, that's what the MASS project is scheduled—set scheduled so we can really handle the capacity that we have. It is our responsibility to ensure that we change the veteran's experience at the VA, and my intent as leading the IT organization is to modernize this organization and gets us to make the decisions that we need to make to focus on the right things.

Mr. FARENTHOLD. We've looked at—we started talking about this in Congress in 2008, 2009. I just—you know, you look at 2008, 2009, Uber didn't exist. They've come up with a complete data infrastructure of the world's largest taxi service without a single driver that can be wherever you—you know, in most cities, can pick you up in a matter of minutes.

Square technologies has come online where you can plug something into your iPad and do credit card. Pinterest wasn't in existence in 2007. I mean, the technology can be done in a timely fashion. Is there a culture problem? What is the problem within the VA that makes IT such a struggle?

Ms. COUNCIL. I think part of the issue is many of the examples you gave are independents, and they're not trying to enable an enterprise. They're not trying to enable H.R. And finance and all the other things that come with it. But I also say part of it has been,

frankly, making some hard decisions and holding people accountable to achieve things we said we will do and making sure we have focus.

We cannot do everything. We've got to do the right things. So when we start a program, we have to complete a program. We need to be relentless in our execution, and we have to focus. And the bottom line is, the team has not done that. We will do that, and that's part of our current new strategy.

Mr. FARENTHOLD. And you know, one of the things Mr. Miller said, he doesn't want to deploy a bad app to turn people off, but part of any IT system—and I remember this back in the 1980s and 1990s when I was a computer consultant. You had to get buy-in from your folks that this was going to make their jobs easier and that it was going to be good for them.

It sounds like that's one of the struggles you're talking about. I mean, this is the 21st century. In almost every case, especially in the private sector, you see the implementation of IT really greatly improve efficiency. Now, some people may argue they have to work harder with fewer people with it, but the level of customer service that people have come to expect as a result of the technology revolution is higher. How can the folks within the VA not get that?

Ms. COUNCIL. You are 100 percent correct. At the end of the day, our opportunity is to bring the system forward and do it in a way that's going to change the environment for the veteran, and up to this point, we have not had core portfolios for our various business groups. We will be putting in, as part of this strategy, new account managers that actually work within the business, with customer relationship people within the business to create portfolio and a ranked stack against the things that need to get done to change this perspective.

If you don't have the business perspective working in conjunction with IT, you don't end up with that kind of system. It's going to make a difference, and so that's where we're focussing.

Mr. FARENTHOLD. Well, I see my time has expired. I would like to take 1 second and urge you to maybe take some lessons from the private sector and develop a entrepreneurial spirit within the VA and the IT department to get her done. Thank you.

Mr. COFFMAN. Ms. Kuster of New Hampshire.

Ms. KUSTER. Thank you very much. My comments and questions are focused on the VA.

Ms. Council and Mr. Burns, Ms. Council just talked about hard decisions and focus. Some have said, and in fact, the recent independent assessment found, that the VistA program was in danger of becoming obsolete.

My question is: Are we at the point where we just can't keep trying to re-jigger the technology, but that we would have better outcomes. And you're focused on the different business activities. And one that I am very focused on is the scheduling to bring down the wait times. You've got the health records. We've now got outside providers.

Could you just give me, if you have an opinion on this, since you've arrived. Or, Mr. Burns, if you've been around longer. Do you feel that maybe we're at the point where we should be considering

more an approach from the bottom up rather than trying to change what we're currently working with?

Ms. COUNCIL. I come from the private industry. I've spent 30 years in private industry. So this is my first foray into any kind of government appointment. And what I look for and what I really want to understand with any large business investment or any system investment, like a VistA Evolution, is what do we expect to be the outcome? What are we really trying to play for, and what do we think that it's going to do for us, not just now, but also in the future.

So to answer your question, that is the reason why Dr. Shulkin and I requested the business case. We wanted to have a fact-based conversation about what the right next steps should be with VistA. We didn't want to take it from the cuff. We didn't want to take it from pulling various data. We really wanted to go into understanding where we are today, where we're hoping to go, and will that take us where we need to go for the veteran in the future? He and I will be looking at that case and spending a concerted amount of time—the timing just didn't work out, but it's this week—to really decide on those core next steps. It's the right thing to do. It's the coherent thing to do. But we want to do it based on having real facts behind us and making sure that we're making the right decision for the veterans long term.

At the end of the day, VistA is a clinical, focused system. It is focused on the patient. And it has enabled that capability to really drive many breakthroughs. What we've got to figure out is what opportunities do we have to continue with it as a backbone, and should we be moving with different levels of technology that we haven't used before, and thinking about it differently architecturally, and thinking about it differently, how the veterans should engage with it, and how it should engage with the clinician?

We are leveraging the program managers' Mr. Waltman's and Mr. Costantian's business report with Dr. Shulkin and myself, and we will make a decision.

Ms. KUSTER. Great. Well, I hope you will keep us apprised. But I think we will be well served by that analysis.

Sometimes we talk about this interoperability, and I wonder whether we are agreeing on what it is that we are trying to describe. It seems to me that there are three different levels: The foundational is just the very basic, where you're looking at the page on the screen and it doesn't allow for the interpretation of the data, or the sharing of the data; structural, the intermediate level, defining the structure or format of the exchange; and then semantic, the highest level, the ability to exchange and use the exchange information. And I know going forward—and certainly the practitioners that I've spoken to—the providers in the VA want to be able to use the data for research, for trends. We have a terrible opioid addiction problem going on. Can we look at the population, learn from the best practices?

Could you just comment on where you feel the VA is right now—what level we are at, and where we might expect to be a year from now?

Ms. COUNCIL. Sure. Actually, Brian and I have been talking about this a lot. So I'm going to give him an opportunity to answer your question.

Mr. BURNS. In the terms that you laid out, first of all, the first level is foundational, or another way of saying it is technical; we do technical exchange

day-to-day. And that's is the fundamental basic level. So we're pretty good there.

Ms. KUSTER. And that's happening right now throughout the VA?

Mr. BURNS. That is happening throughout the VA. It's been happening actually for over a decade of transferring data. Speaking of transmission of data, it is showing the data as is, or, to some degree, with the standards.

The next level, the intermediate level, gets more into how do you begin to use the data. And that's where we're focusing, at least from the IPO perspective of what are the use cases; how do we actually want to use that data, and what is pertinent? What are the key components? What are the key elements? And then how much of that needs to be beyond the technical level?

So we're focusing on that and bringing in the subject matter experts from DOD and VA to have those conversations. That's a continuing, evolving process.

The highest level, as you mentioned, semantic—or another way of saying it is process—that is really looking at the work flows. And that's going across the organizations. That's a much more future issue. And candidly, that's an issue that even ONC is working with, with a strategic plan of how do we get from the current sharing data at the rudimentary levels moving forward.

So to answer your question, I think from a technical standpoint, or foundational standpoint, we are really close. We are there. If we get into the intermediate level, we have pieces of it that we actually can do today. And ultimately, we are trying to go with the modernization beyond just the NDAA, is really to have to monitor our system where we get the work flows and the semantics down that it's

machine-to-machine, and you can do the trend analysis and you do the look-at-the-patient data far better to make decisions real quick, much quicker, and actually seeing more patients as we go.

And that's fundamentally, too, with the VistA Evolution solution, where we are really transforming to look at patient-centric and team-centric and data-centric approaches to the information far beyond what we have traditionally done in our existing systems.

Ms. KUSTER. Thank you very much. And I apologize for going over. Thank you.

Mr. COFFMAN. Mr. Lamborn of Colorado, you're now recognized for 5 minutes.

Mr. LAMBORN. Thank you, Mr. Chairman. I want to thank both the chairmen for having this meeting today. This is a huge, monumental, massive project. And I have to ask a preliminary—I want to back up a step—a preliminary question. So for someone from the VA and someone from DOD, as you work on this interoperability, and I agree with the GAO conclusion, there has to be goals and metrics as you do this. But let me back up and ask about cybersecurity.

Can you assure us that, as you build this forward, that hackers can't come in like they did at OPM, and access medical records of our veterans or of our active duty military?

Ms. COUNCIL. What I will tell you is that our—everything that we're doing around our new cyber strategy is what we also currently do with our defense in-depth, is to protect that data at all cost. Our data is not only in the system, but our data is also on paper. And so ensuring that we're educating the workforce, that we're being diligent about our information and where we leave it, how we mail it, what we do with it, are all a part of what OI&T has to do with ensuring that we keep the veterans safe.

When you look at where we went with our cybersecurity strategy, it's the most holistic strategy that we have ever had in our history. It is focused on eight key domains, including medical cyber. And the whole focus is no one on a team ever wants to happen to a veteran what happened to them through OPM. So that is our focus, that's our key, and that's our mission.

Mr. LAMBORN. Thank you. Mr. Miller, or DeVries?

Mr. DEVRIES. I would just like to add on to that. The cybersecurity is one very important aspect of it, but just as we talked about the standards for the health record that's based on the ONC model, all of us in the government are conforming to the same security standards set up by NIST that we all participate in.

It's important that we have those common standards and that we all conform to them and rigorously enforce the adoption of those. So that's the biggest push. VA has been doing the same thing. DOD is doing it. We have been pushing now the cybersecurity aspect and the need to conform to the standards that have been put out and then measure it by leadership.

Just recently, DOD has put out its cybersecurity. We have published that. We have not come up with a common

scorecard. With that whole aspect is, no matter what the mission area is—and medical, it's just one of those mission areas for us—it must be about protecting the identity of the person, protecting the data, where it is in storage, but also in transport, and then how it's being consumed.

Mr. LAMBORN. Okay. Well, thank you both.

Ms. Council or Mr. Burns, VA interoperability, just among yourselves, is a concern of mine. Leaving aside DOD. There are 1,700 points of healthcare providers among the VA nationwide. What is the interoperability, just among VA health care providers?

Ms. COUNCIL. That is the core part of why we are putting a data management process in place.

Today, when you look at the OI&T organization, we actually have the best opportunity to bring the information together on the veteran's behalf. So you have the health side. And, of course, we have to be able to work with our community providers. But, again, remember, there is a whole benefit level side, and many veterans that don't use the health side, that also creates a level of data and information for the veteran and to their end.

And so our issue, and our opportunity, is really to bring together the entirety of that set of information and start to leverage it on behalf of the veteran and sharing with the veteran what the opportunities are, where the benefit opportunities are, as well as what

they should be thinking of in relationship to their health. That is core to this strategy. We've got to do it. And today, health data sort of sits separately from the benefits data. And that's not appropriate for the veteran.

Mr. LAMBORN. So, if someone moves from Portland, Maine, to San Diego, a veteran, their records go with them electronically today?

Ms. COUNCIL. They do not go with them electronically today. That is what we are working on.

Mr. LAMBORN. Okay. Because, obviously, that has to happen before you can interact with the DOD, and vice versa.

Ms. COUNCIL. Well, interacting with the DOD, information is from active duty to becoming a veteran on active duty. The issue with topography and moving from one location to another is making sure that another location can take that information and use it.

So unless the veteran ports that information, or we send that information on their behalf, it won't be there. We can send the information, but the key is we want to be in a situation where the information is everywhere the veteran is, regardless of their location. And that's what we're working toward.

Mr. LAMBORN. Okay. Thank you.

Mr. COFFMAN. Mr. Lieu of California, you are now recognized for 5 minutes.

Mr. LIEU. Thank you.

Over 45 years ago, the United States of America sent a human being to the Moon and brought that person back. The DOD and VA can certainly have interoperable health records. The fact that you haven't been able to do it for nearly two decades is not excusable. There's a failure of prior leadership at the VA and the DOD. And I believe what compounds this is a decision made in 2013 for both agencies to now pursue separate modernizations. I think that's a ridiculous decision.

And the GAO, in fact, has noted that the 2013 decision to pursue separate modernization rather than a single joint system indicates that achieving interoperability will be an ongoing concern for years to come.

So what I want to know is, why can't you all just pick one system, whether it's a DOD system, or the VA system, and implement it? Why do you have to pursue two separate modernizations? I don't understand that.

Mr. MILLER. So my first reaction is I think it's important we understand that the two departments have different healthcare missions. I think—

Mr. LIEU. But you're not customer-focused, you're not focused on taking care of the active-duty person?

Mr. MILLER. But I'm worried about making sure it works on a submarine at beyond periscope depth; I'm worried about it working in Afghanistan on SATCOM; I'm worried about it taking care of children. I think it's important that we do share a common veterans population, but I think we also need to recognize that the two departments do have two different organizational missions when it comes to healthcare delivery.

Mr. LIEU. Are your systems lesser systems? Are they more basic because they've got to work on a submarine? Are they not as robust?

Mr. MILLER. I wouldn't say they're more basic. I think we have different operating environments. And so, when you're taking care of veterans in the United States CONUS, and you have the ability to do certain things, that environment does not exist in theater for our people that are taking care of our soldiers, sailors, airmen, and marines that go in harm's way.

So I think we have to recognize they're a different operating environment. Additionally—

Mr. LIEU. Okay. So if your system can work in a submarine—let me ask the VA: Why don't you just take their system? If it works on a submarine, it's going to work in your VA hospital. Why don't you just use that system?

Ms. COUNCIL. I can't speak for what decisions were made in 2013, but I certainly can say that our clinical capabilities and what we have to do for the veteran from the time they become a veteran to the time that they leave this Earth is a much more holistic calling. And for us, it is about the total health and capability of that veteran, and for us managing that care of that veteran during that time.

It is a different transaction, I think, is what Mr. Miller is getting to. The timing of that transaction, our situation, our alignment, is a lifelong alignment. And so our decision base probably would not work with the level of transactional focus that they would have.

Mr. LIEU. So you're saying that when the two Secretaries in 2011 said you all could have a single joint system, that they were just wrong?

Ms. COUNCIL. I have no idea what the requirements were.

Mr. LIEU. Now, let me ask you, do any private sector hospitals use Vista?

Ms. COUNCIL. Not that I'm aware of, sir, inside the United States. Outside the United States, yes.

Mr. LIEU. Okay. And do any private sector hospitals use your DOD system that also works on submarines?

Mr. MILLER. Yes, sir. It's one of the largest used in the United States today.

Mr. LIEU. Okay. A question about the viewer that you all are talking about. Can you search on this viewer for terms, or anything else, or is it just a viewer? Interoperable viewer?

Mr. MILLER. I wish we could give you a demo. I think it would explain a lot here. I think—when you think about health care, a lot of the information that your providers or our providers are accessing is just information they're referencing. Right. The decision's going to get documented in their primary care system. But when you think about this viewer that we've been working together on—oh, by the way, it's been jointly done between the two departments—you can configure your displays, you can search for VA patients, you can search for DOD patients.

Mr. LIEU. Can you search for, I don't know, blood test results, or for—

Mr. MILLER. So if you're talking about getting down to a lower level of search capability, that is one of the things that we're work-

ing on. Right now, we've been asked to be able to show all those different domains. And now we're taking a look at the next level, which would be lower level search capabilities within those domains.

Mr. LIEU. What can you currently search for?

Mr. MILLER. When you bring up—it would be easier to display it. When you bring up the patient, it actually shows you all their information, so—

Mr. LIEU. And can you search for something in that document?

Mr. MILLER. Right. So it's not like you're doing business—deep business analytics through the tool. The tool basically presents an integrated record.

Mr. LIEU. Is there any difference between that and someone handing you a Xerox of the file?

Mr. MILLER. Absolutely.

Mr. LIEU. Because you can search for things.

Mr. MILLER. Right. You can search for things. You can configure only what you want to see. So if there's a module you care about, or that you don't want to see, depending on your role, whether you're an ED doctor or you're an outpatient doctor, you can configure that view.

Mr. LIEU. My time is up, so let me just conclude. I believe that two separate modernizations are a mistake. I think that DOD should just take the VistA system and make it applicable on submarines. It shouldn't be that hard.

I yield back.

Mr. COFFMAN. Thank you, Mr. Lieu.

Mr. Walker from North Carolina, you're now recognized for 5 minutes.

Mr. WALKER. Thank you, Mr. Chairman, and thank you to the witness panel. I appreciate your time in being here today and sharing your thoughts and the information that's so crucial to this hearing.

As part of the Cloud Computing Caucus, I have got a few questions from that particular perspective in the world of cyber arena that we are entering in. And let me start with Mr. DeVries, and then maybe we'll come back to Mr. Miller.

How are the VA and the Department of Defense taking advantage of these commercial cloud services to streamline the EHR, the electronic health record, interoperability, and then reduce cost? It's a two-part question there. First, how are we doing that? And how do you perceive it to reduce the cost?

Mr. DEVRIES. I think it's important to lay out where we are today. Today, the Department of Defense health records system, the medical records themselves, sit in a centralized data repository that allows us to have access to it globally down to the submarine, as Chris talked about there.

We are moving aggressively now into the commercial environment. The DHMSM contract that we talked about here in the opening statements, that's on the street. We're aggressively now looking at where are we going to put the medical records, and I will let Mr. Miller talk more about that. But we have laid open, through the Federal standards as well as inside DOD, to grossly pursue, if you meet the security requirements and standards, then let's go ahead

with the most economic and feasible way of doing it. It may not be a cloud, but it may be a commercially-provided data storage.

Mr. WALKER. Mr. Miller?

Mr. MILLER. So as part of our modernization strategy, I would tell everyone that we're trying to take advantage of those emerging technologies because we know it'll simplify things and allow us to accelerate our deployment.

So if I were to go back to our previous systems, we would be installing software and things inside of our hospitals. Well, today—and I think you will see this if you go to any commercial health care provider—really, you don't provide anything to the hospital anymore. That system is basically hosted centrally somewhere, whether in a data center, a cloud, or part of a managed service, and basically, you just have to have a network connection and a device that can support it, just like your smartphone or something else. And that's the same strategy we're pursuing.

Mr. WALKER. I'm aware of how it works. But my question is—I hear you say future tense, we are pursuing. Are there action steps that we're taking?

Mr. MILLER. Absolutely, sir. The proposals that we evaluated all banked on that technology being a key enabler. And so as part of our testing here in a couple of months, we will be testing how well that works. And as part of our deployment, that's our hosting strategy that we're currently under the process of finalizing. But our hosting strategy will be centrally done so that we can take advantage of those technologies.

Mr. WALKER. I appreciate the timeline there. Let me ask this question as well: If agencies that have sensitive information, such as the Health and Human Services Department, can leverage commercial cloud services, can I ask, then, why isn't the VA?

Ms. Council, then I will come back to Mr. Miller.

Ms. COUNCIL. Yes. Fundamentally, that is where we're moving to. Part of our new strategy is a buy first and looking at the platform.

Initially, when I first arrived, I met with the inspector general to understand what their concerns were around us using the cloud. I also looked at our FISMA posture around our data. We had ranked all of our data FISMA-high. And a cloud environment, that is incredibly difficult to be in a FISMA-high platform, and use the cloud. We have reassessed that and re-looked at our policy so that we can move to the cloud.

In addition, our electronic health management platform, which is the platform that is being placed on top of VistA, basically prepares us to move to the cloud. It moves the data into a new platform. So it'll be much more fungible and move us at a location. And we are currently now looking at key applications and virtualization with cloud technology.

Mr. WALKER. Mr. Miller, if I have time, I will come back. But Ms. Melvin, I do have a question for you, making sure that I am crystal clear on this. What is the statutory deadline for deploying modernized electronic health records software with interoperability?

Ms. MELVIN. The deadline that we spoke to in our report was December 31, 2016. That was based on what the 2014 National Defense Authorization Act is currently calling for.

Mr. WALKER. And that's a self-imposed deadline?

Ms. MELVIN. That's the deadline that is called for in the Act.

Mr. WALKER. All right. And you feel good that you are on track?

Ms. MELVIN. Well, from my—from GAO's perspective, our review looked at that and we found that through the plans that both VA and DOD provided to us, no, they are not on track to meet the 2016 deadline. They are in the process of implementing capabilities. They do have initial capabilities I know within the departments.

Mr. WALKER. I'm going to cut you off. That's my concern. We have a deadline, and we are here and we're working towards that. But my time has expired. I will throw it at Mr. Miller, if you want to respond to that, and then I'll yield back to the chairman.

Mr. MILLER. Yes, I would just highlight that the NDAA was silent about what deployment actually meant. And I think, based on any industry best practice, there is no way physically possible for us to take a 2014 NDAA and fully deploy it within the Department of Defense at over 1,200 locations in that timeline. I have to go to ships. I have to go in theater. I have to go around the world.

And so we have provided numerous feedback to the Armed Services Committee. They understand our plan. We met all their NDAA requirements. We got our funding restrictions lifted. They understand that. I think it's important that—I understand the desire to go faster, but there is reality in some of these. We are talking laws of physics about how fast we can modernize this system within the Department of Defense. Because it is much more than just documentation. It drives our scheduling, it drives our registration, it drives our people engagement. It is a fundamental business transformation about how we do business. It not simply a small app that you will have on your smartphone that has to go to a lot of places.

So we need to be incredibly smart here. This is not something we should rush to. And so I understand the GAO report, but I think that the language, as written, was not clear about what deployment actually meant, sir.

Mr. COFFMAN. Mr. O'Rourke of Texas, you're now recognized for 5 minutes.

Mr. O'ROURKE. Thank you, Mr. Chairman.

I have yet to hear a compelling answer to Mr. Lieu's questions about why we can't unify within a single system. I understand the system has to run on submarines, I understand that within the VA we are taking care of veterans from the point at which they transition out of active duty service until, as you said, Secretary Council, they leave this Earth. But I think the fundamentals of the system seem to be basic enough. And given the leverage that you two departments have as the two largest departments within the Federal bureaucracy, there's got to be a way that you can figure this out.

Ms. Melvin, has the GAO arrived at an assessment of the conclusions that these two departments have that they simply not work together? Is that conclusion shared by the GAO, or have you asked yourselves that question?

Ms. MELVIN. Our concern is with the departments going down separate paths. We do think that it has inherent duplication in that approach.

What I would say over time is that as we've looked at both departments' initiatives, I think back in 2013, we issued a report that looked at some of the fundamental reasons, or barriers, if you will, for why these departments weren't able to do that. I mean, inherently, each department has its own culture. And we understand that. What we found, though, that there was a lack of joint strategic planning on the part of the two departments to really look at what it is that they can do collectively to achieve this end state in terms of a joint system. We also saw that—and reported on the fact that there was a lack of a joint architecture, or an overall investment management plan for getting them there.

Mr. O'ROURKE. Let me ask you this—and I'm sorry to interrupt you—but is part of the problem that there are no consequences? Congress mandates a requirement and an

outcome back in 2008, 2009, and Mr. Miller and Secretary Council have given us lots of great excuses for why they can't get it done. You've suggested some of the roadblocks that were in the way. But was there a consequence? Was anybody held accountable? Could these two departments just come to the conclusion that this is just too hard to do; we don't want to do it, for whatever reasons, and they don't do it. And now we are marching down these two paths that may or may not be parallel; may or may not be interoperable; may or may not work together; may or may not waste billions of taxpayer dollars; and there's no consequence.

I've reached the conclusion that the only person who can referee this dispute between these two departments is the President. And it must become a priority of his. And he must—unless there's—and I'm all ears on a compelling reason why we can't do this—unless he says to the Secretary of Defense and the Secretary of the VA: You have to find a way to get to a unified system that works for every active duty servicemember, their family members, dependents, and the veterans. It is certainly possible for all the reasons that everyone has given. Do you agree with that assessment? Do you think it is possible? Or do you agree with Mr. Miller and Secretary Council that this is impossible?

Ms. MELVIN. I won't say that it's impossible. I think our concern is that over the years, the history of looking at this, we've had a lot of concerns about the starts and stops with this initiative. There have been mandates. The 2008 National Defense Authorization Act, for example, directed them to have fully interoperable capabilities.

It has been a history of the two departments going down particular paths that they wanted to pursue for this, changing at certain points. And there has not, in our view, been the accountability for them doing it. They have changed gears along the way; the most clear being moving from two systems to a joint system, and back to two systems again.

So, it is a matter of the leadership taking the stand and saying we're going to make this happen, and working to do that. We have not seen the dedication on the part of the two departments to take a stand on that and actually make it stick.

Mr. O'ROURKE. I would just say to my colleagues that if we are satisfied by the excuses given today, then we share in the culpability for the consequences that I think we are going to be hearing

about at a hearing in 2, 4, 6, 8, 10 years about why these systems can't work together, why we've spent billions of dollars, and why we haven't been able to get the job done. I think we have to insist on consequences and accountability and performance. And we have not done that effectively to date. So I look forward to joining my colleagues in working on that and demanding that of the administration.

With that, I yield back.

Mr. COFFMAN. Dr. Benishek of Michigan, you're now recognized for 5 minutes.

Mr. BENISHEK. Thank you, Mr. Chairman.

Frankly, I agree strongly with Mr. O'Rourke and Mr. Lieu. Some of the answers I heard today, like from you, Ms. Council, you talked about we can't work together with the DOD until we actually get a system that works with the private sector as well. Well, the private sector is not going to be interoperable at any time in the near future that I can ever see. And to just link that together, it gives you another excuse as to why this is not happening.

Frankly, I agree that the President really needs to make this a priority to make this happen. I think I was at that hearing with the Secretary of Defense and the Secretary of the VA a while back, maybe this is 2011, where \$1 billion has been spent and given up. And we just can't stand the fact that we are spending \$1 billion on integrating health care, and you tell us it can't be done. I know that a lot of you are new. But we get sick of this. Really, I want the President to be involved.

I want to go into something else here now that I heard about just today, and that is, the Orlando Sentinel described a project of the VA as making a virtual hospital with 3-D graphics in which veterans will create avatars and walk around examining their healthcare records searching for medical information, and walking to a virtual medical adviser doing e-consults with physicians.

Is anybody aware of this program? Are you, Ms. Council?

Ms. COUNCIL. No, I am not.

Mr. BENISHEK. To me, this is something—do the DOD guys know anything about this? Apparently, this was rejected by the DOD?

Mr. MILLER. No, sir.

Mr. BENISHEK. It's just that it's kind of funny to see the VA doing some kind of a weird virtual hospital as a pilot program when we don't even have—we can't be working the real hospital. So you guys just aren't aware of that. And especially since the fact that most of the veterans have no idea what an avatar and all that stuff is.

Do you know how much—is anyone aware of how much money that the VA has spent in trying to integrate this system? Ms. Melvin, do you know? Or Ms. Council, you're new, so I don't expect much from you. Ms. Melvin, do you know the amount of money? They told me over \$1 billion.

Ms. MELVIN. We don't have a credible number. The most credible number we had was actually in the millions, at \$564 million for the couple of years of doing the integrated electronic health record. We have asked for figures to try to understand more specifically what that number is. I think I would say just over the history of the ini-

tatives that we are looking at, to have it be above \$1 billion would not be a surprise to me.

Mr. BENISHEK. Let me ask another question. This is more like a philosophical question. I had a subcommittee hearing in the VA this morning, and one of the things about IT in the public sector is that I see changes so fast, that there's a new iPhone every 6 months. So the IT stuff changes really fast, but it seems like the VA and the DOD, they take years and years and years to develop a change in their IT system. And they have to, like, consider every possibility before they implement it, and that process takes like 8 years, by which time the thing is obsolete.

Ms. Council, you have some kind of a software background. Why can't we institute the kinds of changes incrementally all the time, rather than have to build a system that takes 8 years to build them, and then by the time it's implemented, it doesn't work?

Ms. COUNCIL. I totally concur with you. I think that since my arrival 3-1/2 months ago into government, it's been an eye-opener of how long it takes to move technology.

There are a number of different governance processes in place that don't hinder in private industry because our focus is on productivity and moving things forward, and at a very different aggressive manner.

What I will tell you we have done with our new strategy is to put a framework forward to push us to much more of an execution focus by having a now, near, and future timeframe. I think we need to time-box our work, and think about what is really going to give us the most bang for our effort and get those things done, and done quickly.

Mr. BENISHEK. Well, that's what I'm talking about. We can't expect to fix the comprehensive repair of the entire system. Let's just move along incrementally and do some changes. You have probably been on Vista, it's like a disaster. But it's like the best thing out there, because nobody has any interoperativity at all.

So I just encourage you and I encourage the President to focus on making sure that you two guys get this all figured out.

Thanks.

Mr. COFFMAN. Retired Sergeant Major Walz of Minnesota, you are now recognized for 5 minutes.

Mr. WALZ. I thank the chairman and my colleagues. I thank each of you for being here. I just came from a roundtable with the 40 largest veteran service organizations. They understand how key this is. Any reform is going to hinge on this.

I also say I understand your expertise that many of you have. I represent the Mayo Clinic. And so, I have at least a working knowledge now over the years of how electronic medical records are diagnostic tools, and all the importance and all the challenges you're up against.

I also know my friend, Dr. Roe and I, years ago, traveled to Afghanistan to watch five different databases be opened as they were operating on someone. Watch MRI—or, in that case, I guess it was an x-ray—not have the bandwidth to move it from Afghanistan, to tape it on their chest on the way to Landstuhl.

So we get this. We were looking at it. We were trying to piece it all together. And our goal is to follow that soldier back from that

injury on the battlefield from right at the aid station all the way back to the VA hospital in Tennessee, or wherever in Minnesota. So we've been on this. We were there and celebrated on April 9, 2009, when the Virtual Lifetime Record President Obama signed. And I say that to you not to grandstand, not to highlight back-to-the-future week, or something like that. I say it to you because you're hearing it up here from members who have been down this road. And it's not for lack of commitment, it's not for lack of expertise, but something has got to break. And you're probably right, Mr. Miller. And I look back at the NDAA on the issue of what deployment means, the spirit and letter of the law. The spirit is, obviously, we just want them to be able to access and make it work. And I get that we've got to clarify and get at specifics.

I guess I'm throwing it out there, and maybe it's more rhetorical than anything, because, again, I do not question your commitment. I think we've got very bright people here. In all fairness, there were very bright people that sat there before you in these very same jobs.

And I hear the deployment date we set. And you're telling us, again, not because you're not working hard or you're not trying, or don't want to get it, or we're saying we're not going to get there. My question might be to all of you, is this, again, like, my question: Can we do this? I mean, I know it goes against the American spirit. I kind of feel like Churchill was right on this. You can always count on America to get it right after they try everything else first. Dang, we're trying a lot of stuff here. When do we get it right?

Mr. MILLER. Sir, I guess just let me make a couple of comments. One is, I think we get it right when our users are happy. And I would offer I really do think if you were to sit down and talk to our users and they see what we've done, we've delivered four releases in 22 months jointly between the DOD and VA focused on improving interoperability, getting feedback back, incorporating it in. So I can show you, just like Apple does, just like Microsoft does, four releases, 22 months. That's actually a little faster than Apple rolls out their iPhone every year. So we have demonstrated that we can make this move faster. I think the bigger thing is that we've all got to remember, it's bigger than the IT, right? The IT is actually the easy part of what we're talking about today. What we don't seem to every want to tackle are the people stuff, the process stuff. All the things that make business systems really hard.

And so I hear what GAO says. I would like to believe a single system between DOD and VA would be able to be there tomorrow. But the reality is, we've got a lot of hard things that make joint programs in DOD incredibly hard. Adding another level with the VA makes it even more hard.

And so I would just offer to everybody, we have to view this as an incremental progression. And I personally believe that what DOD and the VA are doing right now are getting both houses in order to position us, in the future, where we are actually ready to have the discussion about moving to a single system, there is actually a business case.

I think what we tried to do back in 2010 was way ahead of the technology, it was way ahead of where our processes were, it was way ahead of where we are on data, and we fundamentally set our-

selves up to fail. It's not because we didn't have people that believed. It's not because I couldn't show you a pretty technology slide that shows you all these cool wiz-bang things are going to happen. We failed for nontechnical reasons. And those things are things that we have to understand and we have to deal with.

That is why I think you've seen more progress the last 2 years between the two departments, because we learned from that. And now we're focused on getting our collective houses in order and really addressing the interoperability thing.

And just let me say, a single system does not guarantee interoperability. You can go talk to any major national healthcare provider, and they will tell you that they struggle when you're talking about regions or they're talking about working across large geographic areas.

It's not, again, because of the technology; it's because at the local level, they generate different processes, they do business differently.

And so, for us to think that just adopting a single system is going to solve all that, I think it's a little naive. I actually believe we need have the discussion about how do we actually get ourselves to a level of maturity and readiness so that when we want to make the smart business decision, because at the end of the day, this is all about the taxpayer, and it's all about a beneficiary. And I think I can show you very clearly where, using the power of competition and using technology the right way, at least in the DOD, we have been able to drive this cost down and really save on the Department of Defense and make sure our users are getting what they need without, in any way, shape, or form, jeopardizing interoperability.

Mr. WALZ. I appreciate that. My time is up, but I appreciate your candidness. I think that is a question we're going to have to do. We're going to have to dig deep on this. Again, the taxpayers are going to ask for results. And I think you're on the right place there.

I yield back. Thank you, Chairman.

Mr. COFFMAN. Thank you, Mr. Walz.

Mr. Huelskamp of Kansas, you're now recognized for 5 minutes.

Mr. HUELSKAMP. Thank you, Mr. Chairman. Excellent questions. I appreciate the joint hearing on this.

I want to follow up with Mr. Miller, if I might. You've indicated you thought there was no way possible to deploy and meet the interoperability requirements of NDAA, is that the case?

Mr. MILLER. Sir, what I've said is we will have an initial capability that is in line with the NDAA. What I said is not possible, based on industry experience, based on on all feedback from everybody we've engaged with, is to think that I can deploy to more than 1,200 locations within that short of time—

Mr. HUELSKAMP. But you've been in your position for 2 years. Is that what you told us 2 years ago?

Mr. MILLER. Yes, sir.

Mr. HUELSKAMP. Is that what you told the VA 2 years ago? This was not possible?

Mr. MILLER. The deployment date for 2016, sir?

Mr. HUELSKAMP. You've have been in this position for 2 years. Now you're telling us that this was never, ever possible, if I under-

stood correctly, and \$564 million later, we are now saying, well, this is really not possible.

Mr. MILLER. The \$564 million dealt with IHR, which is a prior strategy. The 2014 NDAA directed us to deploy a modernized electronic healthcare software supporting clinicians at the Department no later than 31 December 2016.

What I have routinely said, in my engagements on the Hill, has been, we will provide that software capability at our IOC sites in the Pacific northwest, but it is not physically possible to touch over 1,200 locations around the globe to deploy that software and have a remote chance of being successful.

Mr. HUELSKAMP. So do you have interoperability within DOD currently?

Mr. MILLER. Yes, sir. As I mentioned earlier—

Mr. HUELSKAMP. Or in the NDAA definition?

Mr. MILLER. Yes, sir, I do.

Mr. HUELSKAMP. Okay. I'll ask the VA. Do you have interoperability currently within the VA?

Mr. BURNS. As I said earlier, we have, at the fundamental level, we have the capability of sharing the data, and with data standards. We are doing the "use" case analysis to look at more of the semantic level at this point. So we have pieces of it at this point.

Mr. HUELSKAMP. I'm confused. Yes or no, do you have interoperability within the VA?

Mr. BURNS. We have interoperability within the VA in terms of the data that we have. I don't want to get too technical on this.

Mr. HUELSKAMP. I'm just asking for a yes or no, as defined within the NDAA.

Mr. BURNS. Within the VA, we are able to bring the data together to share it across the areas.

Mr. HUELSKAMP. Yes or no, we have interoperability today in the VA? I thought earlier you said we did not.

Mr. BURNS. What I'm saying was the interoperability, we were talking about DOD and VA. So, within VA—

Mr. HUELSKAMP. There's 1,700 locations in the VA. And we've got thousands of non-VA care locations. I definitely know there is not interoperability between the VA and the non-VA care. Is that correct? My question is within the VA.

Mr. BURNS. Within the VA, we have interoperability to share the data, yes.

Mr. HUELSKAMP. I wonder about that.

A follow-up I have with the VA is, according to the VA, less than 8 percent of medical records are marked as sensitive, based on the aggregate of all VistA systems. In a briefing with IOG, the subcommittee staff was informed that unless records are classified as sensitive, VA does not have the capability to track when those records have been accessed. So does this mean the VA has no visibility on who accesses over 92 percent of medical records at the VA?

Ms. COUNCIL. I think, if your question is related to who actually—that's called segmentation, who actually looks in logs. There is audit and logging into those systems. You know who goes into the system and who's looking at which records. Is it beyond that?

Mr. HUELSKAMP. This is different information. From what I understood, you told our subcommittee staff, you said unless the records are classified as sensitive, you do not know who accesses those records. Is that inaccurate? Is that a change? Or, are you tracking? This is pretty critical. I want to know who's really getting into these systems.

Ms. COUNCIL. I wasn't part of the testimony, sir. I don't know what you're referring to.

Mr. HUELSKAMP. Mr. Burns, do you know what percentage of your records, or do you track the access of those records?

Mr. BURNS. I'm not aware of that statistic, no.

Mr. HUELSKAMP. Would you be willing to provide that to the committee?

Ms. COUNCIL. We can come back to you.

Mr. HUELSKAMP. Would you agree that if you do not know who accesses those records, that we have a problem with privacy of that particular data?

Ms. COUNCIL. I would say yes. And today, what happens with our PII and PHI information, doctors log in, we follow who logs in, as well as the nurses. They log into those records and out. But we will be happy to furnish you with the further information.

Mr. HUELSKAMP. Based on what we find out, if the 8 percent matches, again, we are seeing 92 percent you don't track the access to those records. A follow-up would be later, once we figure out that number is, I want to know what the VA is doing to improve audit details in VistA to ensure that the veteran's PI is not inappropriately accessed.

With that, Mr. Chairman, I yield back.

Mr. COFFMAN. Thank you, Mr. Huelskamp.

Mr. Connolly of Virginia, you're now recognized for 5 minutes.

Mr. CONNOLLY. Thank you, Mr. Chairman. Welcome, to the panel.

This really is so much more important than recordkeeping or how we deploy technology. This is about how we treat our active duty and military veterans. Is that not correct? Anyone disagree with that? Would you agree we haven't done so good?

Mr. DeVries, you cited FITARA. We prefer to call it the Issa-Connolly bill, but FITARA is fine. And I think you cited it because it is a new tool, that had it been available, might have helped us in looking at the investments we made in the past. I don't want to put words in your mouth, but is that what you cited it?

Mr. DEVRIES. So the FITARA ruling has come out—

Mr. CONNOLLY. I'm sorry, what?

Mr. DEVRIES. The FITARA rule has come out, and I think it has been a great leveling set for the other agencies across the Federal side of the house, providing the tools for the CIO to look at. It also reinforced a lot of the behaviors that we were exercising already inside the DOD.

In the case of here, for the medical records, I don't think we had enough authorities, we had enough oversight on it. I would challenge to the committee here. As we were talking about this discussion, we kept using the words system. FITARA, in itself, kind of deals with a system. But it is not a single system. It's about a ca-

pability. It's about understanding the data. It's about understanding the individual, both the patient, but also the provider for it, and I really don't care how the provider accesses or what tools he used, as long as he takes care of me, the customer.

Mr. CONNOLLY. Right.

Mr. DEVRIES. I think that is where we are going.

Mr. CONNOLLY. I would just note for the record, had FITARA been in law at the time, it would have required a cost-risk analysis to substantiate whether the current approach is, in fact, less expensive and faster to implement, as the Departments have asserted, before the 2013 change was made to pull the plug. And GAO, of course, has repeatedly asked for data to substantiate that decision. So it would have been an analytic tool to help us through.

Ms. Council, you're familiar with FITARA?

Ms. COUNCIL. Yes, sir.

Mr. CONNOLLY. And you're moving to implement in the VA?

Ms. COUNCIL. We're fully implementing it within the VA.

Mr. CONNOLLY. Good. Do you think it could have been a useful tool? I know you are only there 3-1/2 months, but that gives you the one benefit of looking back and thinking, How could we have avoided some of the problems?

Ms. COUNCIL. It's always great to have solid data and understand how decisions were made, so you can decide and people understand, at that point in time, this is what we knew, and this is a decision that we made.

Mr. CONNOLLY. Mr. Miller, I wish I had lots of time to talk to you. You said we failed for nontechnical reasons. What did you mean?

Mr. MILLER. Sir, what I mean is, with business systems, you're really changing how the work is done. Right? So you've got to think about the training, you've got to think about changed management. You've got to think about communications. The reality is, is that these tools on the business side exist to enable work flows and to make decisions. And my comment really is, is that oftentimes where we fail, is that we haven't done a very good job of making sure that we account for the user adoption; we don't account for the over-the-shoulder training; we don't account for all those things that have to happen to really make sure that the system is successful.

Mr. CONNOLLY. Yeah. And I think that's a fair point. It's not just about technology. And technology is a tool, not an end in and of itself. But it's important. I've gone to oncology centers where doctors initially really resisted electronic recordkeeping. And now they wouldn't live without it, because they can now see instantly the protocols in place for dozens of patients and make instant modifications. It may be more efficacious. It's saving lives.

What we're about here today is saving lives. It is vital that if I'm active duty and you've got my medical records, they would be seamlessly transferred to VA when I become a veteran. So we're not worried about whether I need to reinvent the wheel on testing and data, but that we're getting to my medical condition and treating it.

And that is what concerns me; that by pulling the plug on an integrated system in 2013 and deciding to reinvest in our two par-

allel systems that are not interoperable, how do we get to the point where it's interoperable? Maybe you perfect the two parallel systems. But when I cease being active duty, I have to go into a brand new system and start all over again.

Mr. MILLER. Sir, it's important to remember, that requirement is not unique to DOD and VA. I'm a Marine. I took my medical record home. But just as importantly, I'm a cancer survivor. I had cancer as a civilian. When I moved from San Diego to Charleston, my provider in Charleston told me to call back to Kaiser Permanente, who had an electronic system, and have them fax it to me.

I understand the importance of taking care of our veterans.

Mr. CONNOLLY. And did that work?

Mr. MILLER. No, sir, it did not. So I think it's important we recognize this is a national issue. How we take care of people, how we provide health care, how people move around between our systems is something that the national community has to figure out. And they are attacking this issue. It has been very clear, if you watch during the procurement that we went through this past year, how much the debate ensued on interoperability and how much progress you got out of some of our—

Mr. CONNOLLY. Mr. Miller, it is a national issue. But we are talking about two Federal agencies that deal with a specific population in our care. And when we talk about taxpayers, they want to know our military, our veterans are getting the best we can possibly deliver. And we're not delivering the best.

And one of the problems is, we've had bureaucratic inertia between two agencies that can't get their acts together on behalf of the men and women we are serving. That's the issue, not that there is some national problem that is bigger than all of this. This is conquerable. This is within our purview. You're Federal agencies. And you owe more to the men and women who've served this country than they're getting. And that's why we're having this hearing.

I yield back.

Mr. COFFMAN. Thank you, Mr. Connolly.

Dr. Roe from Tennessee, you're now recognized for 5 minutes.

Mr. ROE. Thank you, Chairman. I'm going to probably go down a little different road.

I was here, and probably other than Mr. Walz, I've been here on the Veterans' Affairs Committee longer than anyone. I served in the U.S. Army as a physician, as a doctor. I trained in the VA. So I've been in both systems. I was in the system when this was your health record. And you carried it back with you. And it worked okay. And this electronic system we've got in the VA now works so smoothly that the primary care doctors can see about 10 or 12 people a day, and me using this technology, I could see 25 people a day, easily.

Now, there are—we have transitioned to a more modern system, there is no question. And Mr. Miller, you are 100 percent right. I went from paper to an electronic health record. It is not easy. What you're trying to do is not easy. But I agree with Mr. Connolly. Ditto, right on. What has got to happen is we have got to have one system, or 20 years from now we're going to be sitting here having exactly the same conversation. And very smart people 5 years ago sat down and told us, We can make these interoperable.

I went to Great Lakes, Illinois in January, that wasn't a lot of fun, to see how interoperable the system was at the VA and the Navy. And guess what? In about 5 minutes, they could give me, the doctor, a CBC. Well, I haven't got 5 minutes to wait. I can wait on a fax machine that quick, to be able to pull it up.

Let me tell you what \$1 billion is that was wasted. And to do this day, I asked the Secretary, What happened to that \$1 billion when you two were trying to work together—not you all, but the previous DOD and VA—to make this work?

I served in a hospital system in Johnson City, Tennessee, that is \$1 billion system. It has 9,000 employees, 13 hospitals, 70,000 admissions, 250,000 ER visits, and they service a \$600 million debt. That is what a billion can do. And that's what the VA and DOD managed to waste. And I have no idea where it even is. It's hard for me, with a straight face, to go home and say what we did with this money.

Now, I appreciate the fact that like the VA has a legacy, you guys at DOD have a legacy system. I think you were smart to get rid of it and go to something more modern. That does make sense. But what should have happened in that time was your partner, which are taking care of exactly the same patients—one day I was an active duty military, the next day I was a veteran. It happened to you. It happened to me. It's going to happen eventually to everybody after their 30 is in.

So I think that the President should step up and say we're going to put these two department heads together and they're going to work on one system. It may take 5 or 6 years to implement this system. But me personally, I'm not going to be part of another system that 10 years from now, we have the same thing, where you can't even pull up a CBC when you separate from the military.

So, Ms. Council, you have a legacy system you're trying to make work. And I'm not asking you to say it's up to you to switch systems. That's above your pay grade. But wouldn't you think it would be simple if both of you had the same system?

Ms. COUNCIL. Life is always easier when we're looking at the same map, yes, sir.

Mr. ROE. That's what I thought. And the data—and I understand being able to format data where you can see it. I've got that. I know how that works. In our own ACO at home, we have 40 different electronic health systems. I've got it. I understand that. That's why if you can get to one, everybody benefits. And I think if we're going to spend billions of dollars, we ought to go deep in and convert both systems.

And the VA is comfortable, the DOD was comfortable with what they had, but they couldn't work together. And look, smart people tried. I don't think there was any fraud or anything. I think a lot of smart people tried to make this work, and just couldn't.

Ms. MELVIN, you said that, no single system, no identifiable goals. And I think that pretty much felt it out.

Ms. MELVIN. I would agree with you. Our concern throughout the history of this initiative is that there has never been a really defined end state for what it was that the agencies were trying to achieve, and how they could go about really determining what

interoperability is, and then establishing and identifying how they were going to get there.

Mr. ROE. That's what we asked the Secretaries to do in 2013. I was at the hearing when both Secretaries came in and gave us that information that it wouldn't work. So they just stopped. And then that's when the DOD went a separate route. And, again, I have no problem with that. I think it's probably a good idea.

Mr. Miller, you said that this was hard. Well, hard isn't an excuse not to do this. And it's something that I think we have to do going forward for our veterans and for our active duty people. And the fact that a private system will work, you sort of made the system that it wouldn't work at the VA. Well, if it works in a submarine, it works in the private sector. And as Mr. Walz said, we have been to Afghanistan and looked at that wounded warrior there. It will work at a VA, I would think, with perhaps some modifications.

Mr. MILLER. Sir, I'm not going to disagree with you. I think what we also have to recognize is the two departments have a culture of how they go about doing acquisition. In the case of the Department of Defense, I think what we've recognized over the past 5 years has really been we are not in the health IT development business, really. We want to be somebody that leverages the commercial market. We want to be somebody that kind of rides that. When I was a Marine, we had Banyan VINES. It no longer exists. We now use Microsoft products.

I think what has to happen here is we have to attack the problem the same way. The reason why I say it is, it's about bigger than the technology is, when the two organizations budget differently, they do acquisition differently, they view their role in health IT differently, it sounds really—

Mr. ROE. But to interrupt you though, the whole purpose has been stated a thousands times up here. The mission is to take care of both the wounded warrior when they are on active duty, and then the veteran. Nobody cares about all this stuff. What they care about is do I get the care for me and my family? That's what they care about.

Mr. MILLER. Yes, sir, I completely agree. I just think as an acquisition person, I can solve that problem more cost effectively for the American taxpayer by solving interoperability while letting the two departments go through the necessary modernization that needs to happen. The reality, sir, like you recognized, DOD stopped their last deployment of the system in 2006. My niece's husband is an Air Force doctor down in Biloxi, Mississippi. He calls me routinely to talk about how bad his system is. Because he went through residency using commercial systems. He cannot believe the impact on his productivity by not having a system that is as modern and as advanced as what he needs.

So the reason I say that is because we can solve the interoperability challenge. What I can't afford to do is go back to my clinical users who have demanded a new system and tell them I've got 5 more years while we work through all these other hard things. I just think we need to come back for the record and show what the business case is.

Mr. ROE. I'm over my time, Mr. Chairman. One last thing is, is that I've been hearing for 7 years we're going to make this work and interoperable by smart people. It hadn't worked yet.

I yield back.

Mr. COFFMAN. Thank you, Dr. Roe.

Ms. Duckworth of Illinois, you're now recognized for 5 minutes.

Ms. DUCKWORTH. Thank you, Mr. Chairman.

I'm thanking the witnesses for being here today. When I left Walter Reed as a patient, I left with a CD-ROM with my entire record, including the notes from the surgeons who performed my amputation.

In order to get into the VA system, I had to wait 90 days for an appointment, and that consisted of me going in to see a physician's assistant for whom I had to disrobe to show him that I was still an amputee, that in those 90 days my limbs had not grown back.

Now, in that time period, that physician's assistant did not want to see me. He had other patients to see. There was a backlog of patients waiting to be seen. He was not able to just accept DOD's records. And so it was a waste of time for him. It was a waste of time for me. It was a waste of resources for other veterans.

I say this because as a patient of the VA and as a former patient of DOD, I am proud of both healthcare systems, and I am proud of the people who work in both systems, but I am also equally frustrated by both sides because I have been a member of the leadership at VA. In fact, my frustration with this very issue is one of the reasons that I quit VA in 2011 to go run for Congress because of the posturing, the inability to work with each other, and the continued strife, and the waste of sheer taxpayer dollars.

It's literally one of the reasons why I ran for office because I sat in those meetings every week at the Pentagon where, let me tell you, from my personal opinion, Tammy Duckworth's personal opinion, the VA got rolled by the DOD on a weekly basis.

Mr. Miller, what you can tell your folks about—your clinicians about what you can do to get them a good system and not wait 5 years, you can tell them we're going to adopt VistA, and then together, while we're using VistA, we can work toward something else. That's how you get them a better system immediately. But let me tell you that I was there week after week, and then when it went onto months, it would be a new one-star or a new two-star who would rotate in, the old one would leave, and the new one would come in, and goes: Oh, I need a new study, you know, because I wasn't here for all of those weekly meetings, I need a new study, we need to figure out what's going on.

And, Ms. Counsel, I know that you testified earlier, I was watching from my office that the—you have to actually send the data from one VA hospital to another in order to be able to see that. I have to tell you that you've undersold VA a little bit because I've gone to different VA facilities and actually have had my doctors know how to log out of the system for that hospital and then log into the correct system and been able to see my records, which has been very helpful.

And following Hurricane Katrina, veterans who were affected by Hurricane Katrina could actually go to other VA facilities and get the prescriptions they needed wherever they were. Whether that

was in Texas or Missouri or Mississippi, wherever they ended up, they were able to get, so there is a way for that to happen.

But, look, this is about a longstanding deeply embedded culture that prioritizes in both agencies turf battles over the well-being of our service members. It's about a VA system that struggles with the growing demand for the Department's medical services that is burdened by policies and written rules that says you have to go in to see a physician's assistant before he can confirm that your legs didn't grow back. I'm not a gecko. They don't grow back on their own.

It's also about, you know, the fact that we're wasting hours and resources to conduct medical examinations. We should be treating veterans. It's really been disheartening for me personally to watch the massive DOD bureaucracy repeatedly, and I say this again, repeatedly, roll VA over and over and over again, which despite its serious problems at VA, VA has real problems, it was actually one of the earliest organizations to implement EHRs, and let me—I just finished my Ph.D. In October, and the topic of my Ph.D. Was actually electronic health records, and it was partially inspired because of my work on this issue.

It was even more shocking to watch DOD not only roll VA but roll the Office of Management and Budget, which pushed in vain earlier in the administration to convince DOD that it needed to work with VA to develop a single integrated electronic health record system, and to this day, I harbor serious concerns about the decision to abandon the goal of a unified single integrated system for DOD and VA. If we're going to spend \$11 billion of taxpayer money, I don't understand why we wouldn't have invested this astronomical amount of money in a fully functional interoperable system.

Now, having served on the committee—on this committee and Armed Services Committee—I have my suspicions about the motivations and incentives that explain DOD's longstanding unwillingness to work with VA to modernize and enhance VistA to meet 21st century healthcare needs. And I'm not going to get into an argument with you. My personal opinion is everybody's got bureaucratic turf battles. Everybody's got a budget that you would like to hang on to and to supervise. That stuff has got to end because veterans are suffering.

So my question is actually to Ms. Melvin. In your testimony, you noted that neither DOD nor VA could substantiate their claims that maintaining two separate EHR systems would be less expensive than developing a single integrated system and would be developed faster than creating a new unified DOD/VA system. Is that correct?

Ms. MELVIN. That's correct.

Ms. DUCKWORTH. So they're not able to substantiate it?

Ms. MELVIN. They were not able to provide us the information. We asked—I suggest—recommended, I should say, that they provide or develop cost analyses for—cost estimates for the alternatives, the alternative to develop a single system as well as the new—two separate systems and to compare them and to provide information to us relative to—which was the more viable solution.

We'd like to see the justification for why going back to two systems is better than one system. That's very important to really—the bottom line of whether this is a more reliable approach that they're taking over what they had been going with before.

Ms. DUCKWORTH. Are you expecting that information anytime soon?

Ms. MELVIN. I don't believe we are. I don't think that we have any date yet to get that information. We are still working with them. We do still have our recommendations on record related to that, so we are still coordinating with the agencies about that.

Ms. DUCKWORTH. Mr. Chairman, I am well over time. I apologize. But may I request that the two agencies provide that information to this committee?

Mr. MILLER. Ma'am, we have provided that information.

Mr. COFFMAN. If there are no objections, with unanimous consent, please submit the information that Ms. Duckworth has requested for the record.

Ms. DUCKWORTH. Thank you, Mr. Chairman. I yield back.

Mr. COFFMAN. Mr. Hurd of Texas.

Mr. HURD. Dr. Duckworth, I like the sound of that. We may have to have you as a witness on the followup hearing.

I like going at the end of the first round of questioning because you get to hear all the conversations, and this is an interesting topic to me. My dear old father is still upset with me for not taking a job with IBM to help them build databases, so this is something that's a topic that's near and dear to my heart. And I talked about my opening frustration, and that frustration is still here, despite all the testimony.

And my first question, Ms. Melvin, you've alluded to this, and you've answered it, but I'm going to ask this question again. Who is in charge of interoperability of electronic health records between DOD and the VA?

Ms. MELVIN. At this time, the interagency program office is designated as the single point of accountability. However, what we do know at this point and what we've reported is that VA has its own governing body, I think as Ms. Council has alluded to, and also DOD has its own governing body, so there actually are at least three different entities that are involved with this.

Mr. HURD. Thank you. That's helpful.

Mr. Miller, you represent the IPO. Is that correct?

Mr. MILLER. Sir, I represent the Department of Defense as a senior executive responsible for both our interoperability and our modernization efforts. Director of the IPO is Dr. Lauren Thompson, who reported back in May, and she actually runs that office.

Mr. HURD. So is that Dr. Thompson?

Mr. MILLER. Yes, sir. So she reports to——

Mr. HURD. Do you report to her?

Mr. MILLER. No, sir. She works for me and Under Secretary Kendall.

Mr. HURD. So you're her boss?

Mr. MILLER. Yes, sir.

Mr. HURD. So—but you're a DOD employee?

Mr. MILLER. That's correct, sir.

Mr. HURD. So who is this governing body within DOD that is looking about the interoperable medical health record?

Mr. MILLER. So within both Departments, they have their own IT acquisition organization. So within the Department of Defense, that's Under Secretary Kendall. He's responsible for all of our acquisition, and so as on the acquisition and technology side, he is who we report to on our efforts within operability. The same goes on the VA with Ms. Council. What we do is we routinely meet between Ms. Council and Secretary Kendall to review—

Mr. HURD. I get that. I get that. Thank you.

So my question, Mr. DeVries, a clinic, a VA clinic, and let's just say San Antonio, can they have one computer that has access to the VA health system and the DOD health system?

Mr. DEVRIES. They could, sir.

Mr. HURD. Do many people have access to that?

Mr. DEVRIES. Not today.

Mr. HURD. It's a good question.

Mr. DEVRIES. Not today.

Mr. HURD. Why is that?

Mr. DEVRIES. I think it's based upon technology, where we are today, and where the data is. Identity is a critical part, as I talked about before, from both the patient as well as the provider.

Mr. HURD. And you're responsible for that, correct, providing the accesses and the protections around that data, you specifically?

Mr. DEVRIES. Correct. Overall policy is, yes.

Mr. HURD. So if Mr. Miller—can Mr. Miller tell you what to do? Is he in your chain of command?

Mr. DEVRIES. He is not in our chain of command.

Mr. HURD. So the person that's responsible for protecting the data, all right, of our health data, all right, which is a key part of interoperability, the person who's charged with interoperability does not have control over those people making those decisions, is that correct, or am I confused?

Mr. MILLER. Sir, I would offer just checks and balances. So my job within the Department of Defense is to lead the acquisition, the testing, and deployment, but I have to get approval from our CIO organization to make sure it meets the security requirement, we're protecting data, so it's a partnership. You know, there's no single, if you want to, go up to the very senior level, but day-to-day, I don't do anything without him, and obviously, they have to have something that we provide in order to assess our security and how we're doing at protecting people's information, sir.

Mr. HURD. So, Mr. Miller, you said this is a national issue about interoperability of health care records. I agree with you, and I also agree with Mr. Connolly as well. This is about two Federal agencies sharing information amongst each other, and to me, it's shocking that a doctor in San Antonio, Texas, can't have one computer on their desk that accesses both the DOD records and the VA records.

Mr. MILLER. Sir, he can, and I would love to—

Mr. HURD. But they're not. Look, so how many doctors—how many—how many DOD doctors and how many VA doctors have you all talked to on the implementation of this system and what they need in a interoperable electronic health record?

Mr. MILLER. So let me talk about the requirements when you're in interoperability. It is jointly led by easily, you know, 20 or more clinical leaders from both Departments, and so today, in San Antonio, on the DOD side, we provide access to—through what we call JLV, but it's actually integrated her.

Mr. HURD. Yeah. And let's get to JLV.

Mr. MILLER. So, sir, let me just explain. It's in our her. It's inside of AHLTA. There is access to be able to see the VA data and the data from the private sector. That is available to any DOD physician, PA, nurse—

Mr. HURD. How do they gain access to it? Who do they ask? How would—if I'm a doctor, how do I gain access to be able to see those both records?

Mr. MILLER. So to be able to see both records, all they have to do is go—just like any other IT system, they go to the local administrator, they grant them the keys to access the system. We've gone in the DOD from about less than 500, now over 8,000 in about 6 months, and we are continuing to rely. In fact—

Mr. HURD. And this is for JLV?

Mr. MILLER. Yes, sir. In fact, at Brooke Army Medical, it is one of our largest users and actually where we've been doing the operational tests. So besides getting input back on the requirement side, we've actually gone and done operational testing at Brooke Army Medical in Alaska and at Walter Reed to get feedback from, no kidding, users, which has been rolled into the future enhancements of the system. So we have an incredible engagements with our clinical functional users to make sure we're meeting their requirements.

Mr. HURD. But a soldier, sailor, airmen, and marine, when they show up to a VA clinic for the first time, they still have to print out—

Mr. MILLER. No, sir. And I talk to people routinely.

Mr. HURD. Okay. So let me ask you this. So you're saying nobody has to do that?

Mr. MILLER. So, sir, they print that record out because oftentimes our Active Duty, especially when they have been in the service a long time, predate our IT system, so I think it's important to recognize that. We have not been fully electronic within the entire Department.

Mr. HURD. Absolutely. So here's the problem. You have—so quick question, and Mr. DeVries, you may be able to answer this question for me. If I'm in the Air Force and I go see a DOD doctor, is my record different than someone in the Army that goes and sees a DOD doctor?

Mr. DEVRIES. It is not.

Mr. HURD. It is not?

Mr. DEVRIES. It is not.

Mr. MILLER. Same system.

Mr. DEVRIES. Same system.

Mr. HURD. So all branches—okay. Air Force, Army. Is it the same for all branches of the military?

Mr. DEVRIES. Yes.

Mr. MILLER. Same system.

Mr. DEVRIES. You have rights to the same data repository.

Ms. DUCKWORTH. Will the gentleman yield?

Mr. HURD. Please.

Ms. DUCKWORTH. Very briefly. I just have a little something.

Mr. HURD. Please.

Ms. DUCKWORTH. So I don't know if the gentleman is aware of how frustrating this is when there's even a hospital in Chicago that is a joint Federal VA/DOD facility. And in that hospital, they actually have two computers sitting next to each other, one with a VA system and one with a DOD system. And that hospital is supposed to be a joint facility treating simultaneously veterans and Navy personnel. And even there in the hallmark hospital that is the flagship of this effort, it's two computers sitting next to each other. Shameful.

Mr. HURD. It really is. You know, who is actually, so I look at this problem multiple ways. You have the various health facilities that a soldier, sailor, airman, marine may see in their time when they're in DOD. Then you have all the facilities within the VA. Then you have if a veteran has to go to a private, a private healthcare provider. It's a whole other set of issues with interoperability, which I recognize the complication of that. Then you have people that starting today, brand new, starting basic training in this new system in their lifetime. Then you have the people that have already been serving, that have served for 30, 40 years. And they have a number of old records in a legacy system that are super old and outdated. I get that. But what we haven't heard from any of this is what is the plan to solve those different problem sets? We talk about mapping data. Do we not know what the format the various pieces of data are in? Do we not know? They're all basically databases. And we know how many fields there are. There may be thousands of different fields. And each field may hold, it could hold text; it could hold imagery. I get the difficulty of that. But we should already know what that mapping theme is. And in order to do the map from DOD to the map at the VA system, why has it taken 4 years and \$536 million to do that and then everybody throws up their hands and says: Our bad, this is really hard to do, and we're going to have to go through separate systems.

Now, I recognize, I don't think anybody on this panel was around in 2008.

Mr. DeVries, maybe you were. No? Okay. Not around, but you weren't involved in this.

So the first step is have we gone back and looked at the problems that this would solve, right? And, Ms. Council, I know you're new. And I'm excited about you bringing some expertise, some experience from the private sector. I don't know if you knew what you were stepping into when you took this job, but we're glad you stood up and are willing to take on this challenge. But we have to look at the failures of the past. And, I'm sorry, 2 years is not acceptable. And saying that, you know, I wasn't around, when we are talking about the fiscal year 2014 NDAA and that we're going to comply with that requirement but at the end of this month, our soldiers are not going to be able to walk into a VA system and get access to their DOD record. They may be able to see it in JLV. But JLV is the equivalent of using microfiche. And you may be able to search for an individual patient, but you can't search, what was

their blood pressure? And sometimes you have to have VA clinics do the same tests over because they can't see the imagery that was included in their DOD system. That's a huge waste of time. And what is shocking in all this, the men and women, these doctors, the healthcare providers in the VA and the DOD, they're doing a damn good job, right, when they're actually providing that service. And they're the ones that are having to get these workarounds for their system to make sure that they're providing the kind of health care that our soldiers, sailors, airmen, and marines have.

Now, my last question, I'm way over time, and I apologize, Ms. Council, do you have all the tools, authorities in order to do this job?

Ms. COUNCIL. I had this conversation with my team. I think it's the first time in my career I can say yes.

Mr. HURD. Excellent. If you need more, let us know.

Ms. COUNCIL. Will do.

Mr. HURD. And, with that, I yield back.

Mr. COFFMAN. Ms. Kelly, you're now recognized for 5 minutes.

Ms. KELLY. Thank you, Mr. Chair.

The GAO's written testimony concludes that your decisions to pursue separate her EHR highlights, and I quote, "the criticality of these Departments needing to define what they aim to accomplish in these efforts and identify meaningful outcome-oriented goals and metrics." DOD and VA, do you agree with GAO's assessment that outcome-oriented goals would help measure progress toward interoperability and hold your Departments accountable for their progress?

Ms. COUNCIL. Yes, I do.

Mr. MILLER. Yes, we do.

Ms. KELLY. So what do your respective agencies aim to achieve from your interoperability efforts. What do you want for your outcome?

Ms. COUNCIL. From our point of view, we want to be able to have a medical, an electronic health record that is accurate for that veteran that can be used in any way, shape, or form that that veteran needs to have it used and be fully portable to be where the veteran needs to be.

Mr. MILLER. Ma'am, I would say it kind of goes around what we use in the DOD, a quadruple aim, if you will. And those four vectors really are, the first is readiness. At the end of the day, the Department of Defense has to be operationally ready to execute the mission. That includes our servicemembers as well as our families who take care of them while they are on deployment. Secondly, we got to address quality. We got to look at our costs. And we got to look at improving decisions that actually impact the lives of our servicemembers, beneficiaries, and veterans.

Ms. KELLY. And what value in benefits would all users gain from the deployment of modernized electronic health record systems with interoperability?

Ms. COUNCIL. At the end of the day, it's a seamless, unified point of view. And I think that's what every patient wants. They want not to have to answer the question 10 times, not to have to fill out another form, not to have a missed record or a missed report or a missed test. They really want the doctor to have the best informa-

tion at their hands, at the time that they need to make the decisions about their health.

Mr. MILLER. Can I take it a couple ways? One is I think our users really want a modern system that helps with decisionmaking, gives them productivity time back, looks at engaging modern technologies, like smartphones and some of the natural language processing, because at the end of the day, they're busy. And we ought to be doing everything we can to provide them tools that are open and secure to enable them. The second thing I would highlight is we want to go after a modern system that is really about the patient, and it's really about engaging the patient more. We have the ability today to provide our health record information to our beneficiaries. But I think when you see what's going on in the commercial market, you really see where the more the patient is engaged in their healthcare decisions, the better the outcome. So one of the things we are really after here is making sure that we have a system that engages them and so we really can help drive. And, lastly I would say from our perspective on the IT side, it's also about security and it's about driving down sustainment costs. The system we have today, we, actually it's multiple systems, we cannot sustain them forever. We have to adopt an enterprise system that handles a lot of that integration and continues to provide us new technologies so that we can drive our sustainment costs down so we can be affordable.

Ms. KELLY. Both of you had great answers. My last question, what is the status in defining these outcome-oriented goals? You had the right answers. But what's the status?

Ms. COUNCIL. As far as we're concerned, our goals and our new dashboard will be up in January for full visibility. We're looking to make sure we're measuring the right things and we're measuring metrics that matter, not just a bunch of stuff that nobody really cares about.

Mr. MILLER. Ma'am, the IT is actually taking the lead here. They actually had a series of summits and meetings, pulling together subject matter experts and people to kind of working our way through this. In fact, tomorrow is one of those meetings. In the case of the larger DOD side, just like the VA, we have a larger performance metrics and things that we monitor. What we're working through right now is trying to understand is that the right map or are there things we're missing. What we're really trying to do is generate a first step that utilizes those. And, in parallel, what I've also asked that we look at is bringing in some really smart people who understand operations research. We have some great FFRDCs and activities that really understand how to look at some of these things, as well as some of the national health systems. So while we're kind of doing this first effort, we're also going to be doing a very strategic look in engaging some people and having them help us work our way through this. We aren't the first people that have tried to figure some of this out. But we recognize that it's important. And we recognize we got to get something in place that's better than just measuring transactions between our two Departments.

Ms. KELLY. Mr. Chairman and both of you, I look forward to having another hearing so we can hold these Departments accountable and see what the progress is. Thank you.

Mr. COFFMAN. Thank you, Ms. Kelly. Dr. Benishek, you're now recognized for 5 minutes.

Mr. BENISHEK. Thank you, Mr. Chairman. Ms. Council, I know that you're new there. And I have a couple of specific questions. Has anyone reported to you that the Choice Card program participants, the database that's maintained in the Health Eligibility Center is running out of space, and at some point, this issue will cause it to crash? Have you heard anything about that?

Ms. COUNCIL. I have not.

Dr. BENISHEK. Has anyone revealed to you that the Choice Card database apparently didn't go through the normal security review process?

Ms. COUNCIL. I'm not aware of that.

Dr. BENISHEK. This Health Eligibility Center is in Atlanta. Do you think you could kind of look into these issues that have come up to the committee, see if you can go there and see if it's a reality or what exactly the story is with that?

Ms. COUNCIL. As far as the HEC is concerned, related to the other issues, but I'm not sure of the Choice issues that you mentioned but we—

Dr. BENISHEK. I'm just bringing this up because the committee has had these issues, and as long as you're before me here, it sort of relates to the security question, because I'm on the O&I Subcommittee in the VA. We've been reported to that the VA health system has been hacked completely. And, you know, I would like to be sure that this does not continue to be the case. What's your, what's your, I saw Mr. Miller was worried about that with the DOD. And, certainly, we don't want a system that gets hacked.

Ms. COUNCIL. No one wants a system that gets hacked. I'm not aware of our systems being hacked, sir. I would love to look at that information to certainly understand it better. And we move with best diligence and quickly on this issue. And if you, as you're aware, with the cyber strategy we put in place, we've tighten up our processes aggressively, reduced elevated privileges that people have had in our environments, and changed it aggressively. And in particular, with the HEC, as it related to the systems and the applications that were engaged with the veterans, we have remediated that system, which was not an OI&T system, but it is now. But the Choice program, I will certainly look into that.

Dr. BENISHEK. I appreciate that. Thank you.

That's all I have, Mr. Chairman. Thank you.

Mr. COFFMAN. Thank you, Dr. Benishek.

Ms. Duckworth, you're now recognized for 5 minutes.

Ms. DUCKWORTH. Thank you, Mr. Chairman.

There was earlier, Mr. Miller, I think you mentioned that VA and DOD have very different acquisition systems. But I believe that under the previous CIO at VA, he instituted a program called PMAS, Project Management Acquisition System, that, as I recall, was very well received and has saved significant amounts of money for the taxpayers in terms of how the VA acquires IT systems and programs.

Ms. Council, is VA still using PMAS or something similar, a legacy from that?

Ms. COUNCIL. PMAS is not our acquisition system as much as it's a management system for how programs and product, how programming is done to create code. We are in the process of re-looking and reestablishing PMAS to reduce the overhead that it has started to create in order to make sure we can get code done faster with higher quality and security and different techniques we need built in. So it will be a more wholistic look at everything we do from end to end. It's a solid process. But just like every other process, you need to look at it and constantly keep it up to date.

Ms. DUCKWORTH. So is it something that would be used as you're working toward improving the electronic medical record system, something that would be used with—perhaps work toward interoperability?

Ms. COUNCIL. Our PMAS system is primarily used to develop software and to follow the gates and processes to ensure we have all the processes in place to develop software or to purchase software and to deploy it. So it is our management process for how we get things done.

Ms. DUCKWORTH. Thank you.

Ms. Melvin, can you explain to me in more detail the GAO's concerns with the decision by DOD and VA to keep operating two separate EHR systems rather than establish a single, integrated system?

Ms. MELVIN. Our concern is just the inherent duplication that comes with having two paths to developing systems that are serving a large body of population that's very similar. Also there are a large number of functions that are for inpatient requirements that are the same. A prior report showed 97 percent of those requirements being the same for inpatient I should say. And our concern is from the standpoint of not having a common, whether the agencies will have a common goal that they work toward; whether, in fact, when they ultimately have this system and they've gone to these two separate paths, whether they, in fact, do end up with systems that have the interoperable capability between them that will allow them to serve patients in the way that we've talked about today and ultimately to improve the healthcare mission. So it's about the cost of having duplicative systems. It's about the overall management relative to your ability to deliver on those capabilities and serve a common mission for the servicemembers.

Ms. DUCKWORTH. So 97 percent—

Ms. MELVIN. This was a study that was previously done that showed 97 percent or over 97 percent of their inpatient functional requirements were common across the two Departments. So that is a factor that goes into our concern that the agencies do need to look more closely at what their capability is to put in place a system that's common for both Departments.

Ms. DUCKWORTH. Is it a true statement that VA operates the largest hospital network in the Nation?

Ms. MELVIN. The VA and DOD have two of the largest healthcare networks in the Nation, yes.

Ms. DUCKWORTH. How big are they in relative size, the size of VA's network compared to the DOD's size?

Ms. MELVIN. I believe that DOD's system is slightly larger. I don't want to misspeak on that. But I believe their healthcare system is larger than VA's.

Ms. DUCKWORTH. Is it larger in terms of number of patients served? Or is it larger in terms of more facilities?

Ms. MELVIN. I will defer—

Ms. DUCKWORTH. Ms. Council, you look like you have an answer.

Ms. COUNCIL. The DOD is larger in terms of different outlets and facilities. We are larger in terms of the number of patients we see.

Ms. DUCKWORTH. Do you know how many patients you serve?

Ms. COUNCIL. The last time I saw the number, it was 10 million approximately in DOD; 24 million in the VA.

Ms. DUCKWORTH. All right. So you have more than twice as many patients accessing your healthcare system than DOD does.

Ms. COUNCIL. That information, if I'm recalling it properly, yes.

Ms. DUCKWORTH. Okay. Ms. Melvin, can you explain how this decision for them to keep two different systems instead of a single, integrated system is going to affect interoperability well into the future?

Ms. MELVIN. I don't know the answer to that. I mean, one of our concerns is that the Departments haven't provided a clear justification for why two systems is better than one. That's the critical information that is needed to really justify moving toward the two systems.

Again, the history of this has been that they've been down the path of two systems for many, many years. The single joint system, as we understood it, was intended to take care of some of the challenges that the two departments had had in their prior efforts to develop interoperable capabilities between two systems. So having a justification for why moving back to that, besides the obvious factors of cost and schedule that they have mentioned, are important to know.

Ms. DUCKWORTH. Maybe you'll get an answer to that question since you've not been able to get that information as the GAO. But maybe with the Congress asking for it, they will finally provide it. I'm out of time.

I yield back.

Mr. COFFMAN. I thank you, Ms. Duckworth.

Mr. Hurd, you're now recognized for 5 minutes.

Mr. HURD. Ms. Melvin, would you be able to get us a list of the individuals by name at DOD and VA, including subcontractors, contractors, that worked on the interoperability project between 2008 and 2013?

Ms. MELVIN. We will look into the information that we have and provide you—

Mr. HURD. And I'm curious as to the number of people that worked on that project, the interoperability project, from 2008 to 2013, who are still employed at both organizations, and which contractors we're still using from that period when we spent over \$500 million and decided that instead of joining everything, we're going to split it up.

Ms. MELVIN. Chairman Hurd, that is not information that I know that we have in our records specifically at this point. But we would be glad to work with your staff to get that information.

Mr. HURD. Great. Thank you very much.

Mr. MILLER. What are your next two milestones for achieving interoperability?

Mr. MILLER. Sir, on the interoperability front, I actually, just last night, we provided an update on our data maps. And so our next milestones are basically to continue to evolve those. Our next delivery on the maps because we are now entering a maintenance phase and getting feedback, will be in the December timeframe. And then we're also in the process of doing our next software delivery which will be early next calendar year. And that software delivery is, basically, again, taking feedback. There's areas that our functional users have requested. And we're going to be working that software release in the January timeframe.

Mr. HURD. Great. Thank you.

Ms. Council or Mr. Burns?

Mr. BURNS. A couple different fronts. One is, on the data mapping, we have a quarterly update that we do. The next one is coming up in November to give us the next set, as I mentioned earlier, the 25 domains. And then we update each one of the respective domains going forward. That's just on data mapping. And that's part of interoperability. In addition to that, we are testing and rolling out EHMP, otherwise known as the Electronic Health Management Platform. That is, in its current form, is we call version 1.2. And that is a read-only version right now. It's been—it's in delivery at two cites. And we're going to continue to roll that out.

Mr. HURD. It's in delivery, so they're the beta testers?

Mr. BURNS. Yes.

Mr. HURD. What are those cites?

Mr. BURNS. Hampton and the other one, off the top of my head, I don't recall. But I will get you the name of the other one.

Mr. HURD. Great.

Mr. BURNS. And then we are then going to the next phase, which is EHMP 1.3, in the January time frame to start what we call IOC, Initial Operation Testing, of that. That will give us the first capability of doing order and report write capability beyond the read capability we have. By the way, that also has a very good search engine built into it, the 1.2 version, that will allow you to do a lot more search capability and look up information, contextual and content capabilities. So those are two key things moving us in the interoperability direction to move out. And our goal is to have 1.3 out by the end of the year so that we can meet the December 31st—

Mr. HURD. Thank you, Mr. Burns and Ms. Council and Mr. DeVries. I'm looking forward to having further conversations with you all about the implementation of FITARA and ensuring that you all have all the tools you need in order to bring our IT infrastructure into the 21st century. Thank you all for being here.

I yield back, Chairman.

Mr. COFFMAN. Thanks to the panel.

You're now excused.

Today, we have had a chance to hear about problems that exist with multiple efforts between the Department of Defense and Veterans Affairs to make their health records either integrated or interoperable. This hearing was necessary to identify the continued

failures that have allowed these efforts to remain ongoing after decades of attempts to join these two health—to join these two health records that cover patients of the largest healthcare systems in this Nation.

As I mentioned in my opening statement, VA has expended billions of dollars in an attempt to improve its electronic health record system and make it interoperable with that of the DOD. Yet GAO has found that these agencies' health records would not be fully interoperable until at least 2018. Unfortunately, based on VA's track record regarding its information security failures and the numerous attempts made to join these two agencies' records, I am not even convinced that it is a feasible completion date. I am encouraged, however, by the recent personnel changes that have occurred within VA's Office of Information and Technology. But there is still much work to be done.

I believe LaVerne Council has a sound plan and strives to fix VA's OI&T. But the question is, how long will it take? I am angered by the fact that VA and DOD poorly structured and continued to misuse the IPO. It is no longer a, quote/unquote, "single" focal point mandated by Congress. It has become as divergent as the VA and DOD. And through it, both Departments have grossly misused money appropriated by Congress.

As such, I am exploring ways to correct these problems once and for all, since VA and DOD have continued to disregard Congress on this matter.

I ask unanimous consent that all members have 5 legislative days to revise and extend their remarks and include extraneous material.

With that, without objection, so ordered.

I would like to, once again, thank all of our witnesses and audience members for joining us in today's conversation. And I would like to thank Chairman Hurd for holding this joint hearing on these very important issues.

With that, this hearing is adjourned.

[Whereupon, at 5:27 p.m., the subcommittees were adjourned.]

APPENDIX

MATERIAL SUBMITTED FOR THE HEARING RECORD

October 27, 2015
2 p.m. – Rayburn 2154
Congressman Gerald E. Connolly (VA-11)

**Joint hearing Oversight Subcommittee on IT &
Veterans Subcommittee on Oversight and Investigations:
“VA and DoD IT: Electronic Health Records Interoperability”**

I appreciate the opportunity for this joint subcommittee hearing to assess progress being made by the Department of Veterans Affairs and Department of Defense to achieve interoperability within their vast array of electronic health records. The two departments combined provide health care services to more than 16 million active and retired service members and their dependents at a cost of more than \$100 billion a year. This is an extremely mobile population, with most moving every couple years while on active duty and visiting both public and private medical facilities across the globe during that time. An interoperable system allows doctors and patients to access a patient’s comprehensive medical record spread across multiple departments and locations. This has the potential to transform the delivery and portability of health services.

The two departments have been working toward the goal of interoperability for the past two decades, but the challenges have bedeviled multiple administrations, Members of Congress, our medical professionals, government contractors, and the patients themselves. In its latest report on High-Risk Areas earlier this year, the Government Accountability Office noted, “the ongoing lack of electronic health record interoperability limits VA clinicians’ ability to readily access information from DoD records, potentially impeding their ability to make the most informed decisions on treatment options, and possibly putting veterans’ health at risk.”

Of course, there is an equally important companion effort underway to convert to interoperable electronic health records within the broader national medical community. The Affordable Care Act designated this initiative as a priority and provided financial assistance and other incentives to advance widespread adoption by hospitals and medical practices. The American Hospital Association reports that 75% of hospitals now employ at least a basic use of electronic health records compared to 16% when the ACA was signed into law, yet only 23% are considered to be interoperable. Ensuring interoperability between federal and non-federal health systems is increasingly important given Congress’ adoption last year of the Veterans Access, Choice, and Accountability Act to allow more veterans to seek private-sector care if the VA is unable to meet their urgent needs.

I am encouraged to learn progress is finally being made, and I look forward to hearing more from today’s witnesses about how the VA and DoD are sharing “a significant amount of health data – more than any other two major health systems,” as Mr. Miller, the Program Executive Officer for

the DoD's Health Management System says in his prepared statement. As I understand it, the two agencies have developed and are expanding the use of a Joint Legacy Viewer, which allows a doctor to view a service member or veteran's complete medical history. A successful pilot with a few hundred users at a handful of locations has now expanded to more than 27,000 users between the two departments at more than 200 locations, and we're also starting to see information sharing with certain private-sector medical providers that have the technical capabilities. In addition, the departments are making progress on standardizing the codes by which they catalogue information for sharing. While neither met the October 2014 deadline to complete that standardization as established by the National Defense Authorization Act for Fiscal Year 2014, we expect to hear today that both departments are now on track to complete that work by the end of this calendar year.

I also look forward to hearing more from the GAO on its latest recommendations to the two departments to establish outcome-oriented goals and the related metrics necessary to measure how these interoperable capabilities are improving health care services for our service members and veterans. The GAO notes that the Interagency Program Office, tasked with coordinating this initiative between the two departments, has developed process metrics and begun to report on them, but it only recently tasked a team to "identify metrics that would be more meaningful for determining the impact of increased interoperability, such as metrics on the quality of a user's experience and improvements in health outcomes." I cannot overstate the importance of establishing measureable goals and metrics against which we can measure progress. During my 14 years in local government, I routinely repeated the mantra of "mission, passion, metrics," counselling our county staff to set a clear mission, infuse the workforce with a passion to achieve it, and then establish identifiable metrics to gauge success. Frankly, these kinds of objectives should already be in place, and I hope to hear that a timeline has been established to deliver those goals and metrics so we can begin to apply them.

Finally, I want to thank Mr. DeVries, the Defense Department's principal deputy CIO, for acknowledging the role of the Federal IT Acquisition Reform Act, which I co-authored with the former chairman of the Oversight Committee, in helping to improve how government buys, implements, and manages IT products and services. We will have another hearing next month to review agency progress in implementing the FITARA framework, but today, I am particularly interested in Mr. DeVries' assessment of how the enhanced CIO authorities, along with the tougher transparency and risk management requirements, under FITARA will guide the health IT system modernization now underway within the two departments. Further, I am curious to know how the FITARA requirements would have influenced the decision by the two departments to abandon their effort to develop a single, integrated electronic health record system in favor of the current approach. After investing two years and \$564 million in that effort, the departments pulled the plug and restructured the program, opting instead to modernize their separate systems.

For starters, FITARA would have required a cost and risk analysis to substantiate whether this current approach is, in fact, less expensive and faster to implement as the departments have asserted before the change in course was made. GAO has repeatedly requested a more detailed rationale for the new approach, noting that the “separate modernizations are not expected to be completed until after the 2017 planned completion date for the previous single system approach.” I’m not suggesting we go back to that approach, but I would urge the two departments to quickly produce a comparison of the two approaches for our committees so that we have a standard by which to measure your progress.

Everyone here understands the sacred responsibility of the VA and DoD to provide for the care and wellbeing of our men and women in uniform and their families. Ensuring doctors have access to accurate, reliable health information, regardless of where patients are seeking or have previously received care, is the foundation for providing quality health care. I hope the two departments seize this opportunity to become leaders in this transformative interoperability initiative, but doing so will require mission, passion, and metrics.

Questions for the Record
Committee on Oversight and Government Reform
Subcommittee on Information Technology
VA Information Technology: Electronic Health Record (EHR), VistA Evolution,
and Supply Chain Risk Management Hearing

U.S. House of Representatives
October 27, 2015

- 1. What is the VA's definition of interoperability as it pertains to the electronic health records kept by the VA?**

VA Response:

VA uses the definition of interoperable as defined in Section 713(k)(3) of the 2014 NDAA. This defines "interoperable" as the ability of different electronic health records systems or software to meaningfully exchange information in real time and provide useful results to one or more systems. More simply, the IPO Health Data Interoperability Management Plan (HDIMP) bases its definition on "the ability of two or more systems or components to exchange information and to use information that has been exchanged."

- 2. Have VA and DoD agreed on a definition of interoperability?**

VA Response:

Yes, DoD and VA follow the definition of interoperable defined in Section 713(k)(3) of the 2014 NDAA. Further, the Health Data Interoperability Management Plan (HDIMP) outlines the role of the IPO in assisting DoD and VA in achieving their interoperability mission through the meaningful exchange and use of health data. While the Departments play the primary role in the implementation of their interoperability functionality, the IPO supports the Departments' implementation by serving as an independent validator of the Departments' data mapping products. The IPO fulfills this role by leveraging IPO technical and clinical expertise and standards development organization engagements to provide technical and clinical guidance and clarification to the Department implementers.

- 3. Will the VA meet the NDAA statutory definition for interoperability all of its electronic health records before 2016? If not, what percentage of VA electronic health record data will meet the NDAA statutory definition of interoperability before 2016?**

VA Response: VA is on track to meet the statutory requirement of Public Law 113-66 (P.L. 113-66), Section 713, "Electronic Health Records of the Department of Defense and the Department of Veterans Affairs," of the NDAA for

fiscal year (FY) 2014, by December 31, 2016, by achieving an interoperable EHR with an integrated display of data with DoD and private providers.

VA is currently interoperable with DoD with the millions of transactions via the Bi-Directional Health Information Exchange, utilized by VA's legacy viewers, and via the Joint Legacy Viewer (JLV). JLV will continue to be used beyond December 31, 2016, along with the Enterprise Health Management Platform (eHMP), which is currently under development. JLV and eHMP will together consume the functionality of VA's legacy viewers.

JLV provides a standards-based, integrated, and chronological view of near real time EHR information from all VA and DoD facilities where a patient has received care as well as from external health care partners in an individual workflow configurable display. As of October 2014, JLV has been available for use at all VA facilities, but its use was limited to an initial subset of users, all of which could utilize JLV at any VA facility. As JLV's capabilities and data sources have increased, it has been expanded across the enterprise; first to users that had the highest need of joint VA/DoD data and then to other users across VA. In FY 2015, JLV increased from 600 to 17,965 users and as of December 6, 2015, JLV had over 24,000 authorized users (Veterans Health Administration (VHA): 19,700 and Veterans Benefits Administration (VBA): 4,300 users).

eHMP is VA's target clinical application under the VistA Evolution program that currently enables a comprehensive view of the "virtual patient record" provided by the VistA Exchange component. The Planned Enterprise Availability, eHMP v1.2, is currently scheduled for initial release in March 2016. Future version release dates are currently being determined.

4. How many facilities currently have an operational Joint Legacy Viewer (JLV) capable of viewing DoD and VA? Which facilities employ an operational JLV? When will all 1,700 VA care facilities employ the JLV?

VA Response: JLV is operationally available at all 1,700 VA facilities. As a web-based application, JLV's access is tied to an authorized individual who has access to the VA network, regardless of what VA location they work at. As of October 2014, JLV has been available for use at all VA facilities, but its use was limited to an initial subset of users, all of which could utilize JLV at any VA facility. As JLV's capabilities and data sources have increased, it has been expanded across the enterprise; first to users that had the highest need of joint VA/DoD data and then to other users across VA. In FY 2015, JLV increased from 600 to 16,939 users and as of December 8, 2015, JLV has over 24,000 authorized users (VHA: 19,700 and VBA: 4,300 users).

Several examples of the extent and breadth of JLV's diverse use across VA's Enterprise include: (1) all Veteran's Crises Hotline personnel; (2) DoD-VA Eye Injury

Registry team; (3) all clinical staff at El Paso VA Health Care System; (4) the entire clinical pharmacy staff at the North Florida/South Georgia VA Health Care System; (5) the entire Compensation and Pension Service staff at the VA San Diego Health Care System; (6) over 1,800 VA clinical users at James A. Lovell Federal Health Care Center in North Chicago, (7) clinical staff at all Polytrauma Rehabilitation Centers; and (8) 800+ clinical staff in VA's Transition Care Management and Liaison Programs supporting transition and care coordination needs of Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn Veterans nationwide. Again, these are just a few of the many examples where JLV is being used successfully. Additionally, VBA's use of JLV is expanding and there are now approximately 4,300 users. Of those users there are: 997 Vocational Rehab Counselors and 635 Benefits Quality Review team members.

5. **The ONC roadmap for nationwide interoperability ends in 2024, how do the VA's timeframes and milestones overlap with the ONC roadmap? Do you believe it will take that long to obtain interoperability between the VA and DoD if you are committed to the ONC standards and metrics?**

VA Response: VA has a VistA Evolution Interoperability Plan and has been developing an overall VA Interoperability plan. VA's current plan is to develop a Department-wide Interoperability plan and roadmap that aligns with ONC's new nationwide interoperability roadmap.

VA and DoD are Interoperable today. VA is on track to meet the statutory requirement of P.L. 113-66, Section 713, "Electronic Health Records of the Department of Defense and the Department of Veterans Affairs," of the NDAA for FY 2014, by December 31, 2016, by achieving an interoperable EHR with an integrated display of data with DoD and private providers.

VA and DoD are committed to continuously improving interoperability. VA has committed to meeting the ONC Interoperability Roadmap, standards, and metrics.

6. **Does the VA encrypt all health care data both at rest and in transmission between VA facilities, private sector providers, DoD and VA care facilities?**

VA Response: Of VA's 355 FDCCI-reportable data centers, 254 are determined to store health care data at VA. This includes 12 VistA centers, including Defense Information Systems Agency Defense Enterprise Computing Centers, regional data centers, and VA core data centers. This also includes computer rooms at each VA medical center, computer rooms for biomedical support, and mission support centers. These numbers may fluctuate, as whether certain biomedical computer rooms are considered FDCCI-reportable data centers, which depends on each location's circumstances.

7. How many data centers store health care data at the VA?

VA Response: VA uses encryption to protect health care data in transmission between private sector providers, DoD, and with a majority of VA care facilities. Within VA facilities themselves, not all health care data is encrypted “at rest,” as VA also relies on the physical security controls in place at our facilities to also protect health care data.

CHARRTS No.: HOGRC-01-001
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #1

Definition of Interoperability

Question: What is DOD's definition of interoperability as it pertains to electronic health records kept by the DOD?

Answer: DoD uses the definition of interoperable as defined in Section 713(k)(3) of the 2014 NDAA. This defines "interoperable" as the ability of different electronic health records systems or software to meaningfully exchange information in real time and provide useful results to one or more systems.

CHARRTS No.: HOGRC-01-002
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #2

NDAAs Definition of Interoperability

Question: Will DOD meet the NDAA statutory definition for interoperability all of its electronic health records before 2016? If no, what set or percentage of DOD electronic health records data will meet the NDAA statutory definition of operability before 2016?

Answer: Yes, DoD has met the statutory requirement defined in Section 713 of the 2014 NDAA. The NDAA requires that the electronic health record systems of DoD and the Department of Veterans Affairs (VA) are interoperable with an integrated display of data by complying with the national standards and architectural requirements identified by the DoD/VA Interagency Program Office (IPO) in collaboration with the Office of the National Coordinator for Health Information Technology (ONC). DoD sent a letter on November 16, 2015 to stakeholder congressional committees notifying them of DoD's progress.

CHARRTS No.: HOGRC-01-003
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #3

Definition of Interoperability

Question: Will DOD be using the NDAA statutory definition of operability going forward? If not, what is the definition of interoperability DOD will be using going forward?

Answer: Yes, DoD will continue to follow the statutory definition of interoperable.

CHARRTS No.: HOGRC-01-004
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #4

Joint Legacy Viewer

Question: How many DOD health care facilities currently employ the Joint Legacy Viewer (JLV)? What percentage of DOD health care facilities currently employ the JLV?

Answer: All DoD health care facilities have the ability to access JLV. System administrators at the 102 AHLTA/CHCS host sites control the issuing of the "JLV key" to users in order to access. As of Dec 4, 2015, 20,538 JLV keys have been issued to users at 89 of the 102 sites (87%). DMIX continues to work with the Service Leads and the sites to promulgate the JLV keys.

CHARTS No.: HOGRC-01-005
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #5

Data Center Storage

Question: How many data centers store health care data at the VA?

Answer: The information requested in this question is outside the purview of PEO DHMS and should be addressed to the appropriate office within the Department of Veterans Affairs.

CHARRTS No.: HOGRC-01-006
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #6

Encryption

Question: Does the DOD encrypt all health care data at rest and in transmission both between DOD facilities, but also private sector providers, and VA care facilities?

Answer: Yes. VA Trusted Internet Connection Gateways (TIC GWs) provide secure communication between VA based networks and DoD networks via the medical community of interest (MED-COI) Enterprise Gateways. The Med-COI Gateway components provide a secure means to monitor, screen, and restrict traffic flows into and out of the DoD Medical Health System (MHS) networks. The gateways provide a secure means of communication and access to both Personal Identifiable Information (PII) and Protected Health Information (PHI), between the Departments.

DoD leverages standard commercial off the shelf equipment on the DISA Approved Product List (APL) configured to adhere to DISA Security Technical Implementation Guide (STIG) compliance. Data in transit is secured by DoD leveraging commercial standard encryption (e.g., AES-256 encryption) per DoDI 8500.2 over Med-COI dedicated transport improving performance and availability. At the Med-COI Gateways, the data is decrypted for inspection prior to being re-encrypted for transport to systems at various DoD sites. The VA is responsible for securing the traffic in transport across the VA network. DoD secures data at rest by leveraging multiple industry best practices (e.g., FIPS 140-2), which DoD is currently rationalizing into a single solution. From a network perimeter perspective, DoD is proactively working to rationalize to a single Computer Network Defense Service Provider.

CHARRTS No.: HOGRC-01-007
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #7

Definition of Interoperability

Question: Have VA and DOD agreed on a definition of interoperability?

Answer: Yes, DoD and VA follow the definition of interoperable defined in Section 713(k)(3) of the 2014 NDAA. Further, the DoD/VA Interagency Program Office (IPO) Health Data Interoperability Management Plan (HDIMP), which is developed in collaboration with both Departments, further defines interoperability requirements and management processes needed to achieve meaningful interoperability. While the Departments play the primary role in the implementation of their interoperability functionality, the IPO supports the Departments' implementation by establishing the technical interoperability requirements. The IPO fulfills this role by leveraging IPO technical and clinical expertise and standards development organization engagements to provide technical and clinical guidance and clarification to the Departments.

CHARRTS No.: HOGRC-01-008
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #8

Defense Healthcare Management System Modernization

Question: Has DOD's Defense Healthcare Management System Modernization (DHMSM) received certification from the Electronic Healthcare Network Accreditation Commission (EHNAC)? If not, will DHMSM meet EHNAC's requirements for certification? When does DOD anticipate DHMSM meeting EHNAC's requirements for certification?

Answer: The DHMSM solution from Cerner has been accredited by ENNAC. By contract, Cerner will maintain required accreditation for the current product and any associated updates as they are published.

CHARRTS No.: HOGRC-01-009
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #9

Defense Healthcare Management System Modernization

Question: Has DOD's DHMSM received certification from the Office of the National Coordinator for Health Information Technology (ONC)? If not, will DHMSM meet ONC's certification requirements? When does DOD anticipate DHMSM meeting ONC's requirements for certification?

Answer: The DHMSM solution from Cerner has been accredited by ONC. By contract, Cerner will maintain required ONC certifications for the current solution and receive and maintain certification on any associated updates as they are published.

CHARRTS No.: HOGRC-01-010
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #10

Defense Healthcare Management System Modernization

Question: Will the new DHMSM contract be compliant with the ONC Health IT 2015 Final Rule?

Answer: Yes. The 2015 Edition Health IT Certification Criteria (2015 Edition) facilitates greater interoperability for several clinical health information purposes and enables health information exchange through new and enhanced certification criteria, standards, and implementation specifications. The final rule continues to focus on the establishment of an interoperable nationwide health information infrastructure to have a secure but seamless flow of electronic health information.

Similarly and to this end, the DHMSM EHR System will leverage data exchange capabilities in alignment with the Interagency Program Office (IPO) for standards-based health data interoperability and secure information sharing with external partners to include the VA. The EHR incorporates appropriate considerations for re-configurability, portability, maintainability, technology insertion, vendor independence, reusability, scalability, interoperability, upgradeability, and long-term supportability. The EHR architecture promotes the use of an open architecture as well as adoption of other standards and requirements, tailored to meet its specific Service and Joint requirements.

In line with ensuring that the electronic health information is secure, the contractor is required to provide cybersecurity that conforms to the DoD cybersecurity and the DoD Risk Management Framework requirements as outlined in the Defense Information Systems Agency (DISA) Information Assurance Support Environment (IASE) as virtually documented at <http://iase.disa.mil/index2.html>.

The contractor is also required to establish appropriate administrative, technical, and physical safeguards to protect all Government data, to ensure the confidentiality, integrity, and availability of Government data in accordance with the requirements. Additionally, the contractor must comply with all cybersecurity training and Joint Interoperability certification requirements, as delineated in DoD 8570.0-M.

CHARRTS No.: HOGRC-01-011
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #11

National Interoperability

Question: Will the DOD's progress towards an interoperable electronic health record be at all impacted by the ONC's recently released roadmap to national interoperability?

Answer: No. DoD has worked closely with ONC throughout our interoperability and modernization efforts.

CHARRTS No.: HOGRC-01-012
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #12

Metrics for Interoperability

Question: According to the GAO's August 2015 report, the IPO has taken steps to develop process metrics intended to monitor progress related to the agencies' achieving interoperability. However, the report also states that the process is still ongoing, and that IPO has a team that is working with DoD, VA and subject experts to identify metrics that would provide meaningful measures of the impact of interoperability. Does the IPO have a time frame for when this team will report on those metrics?

Answer: In accordance with sections 713(g)(1) of the National Defense Authorization Act for Fiscal Year (FY) 2014 (Public Law 113-66) the U.S. Department of Defense (DoD)/U.S. Department of Veterans Affairs (VA) Interagency Program Office (IPO) has continued to provide Quarterly reports to Congress detailing the data sharing efforts of the DoD and VA. In order to further enhance reporting efforts, the DoD/VA IPO, in close coordination and collaboration with the DoD and VA, began planning the development of outcome-oriented interoperability metrics to measure and track the impact interoperability has on our patients and providers. Based on the recommendation of the Government Accountability Office's August 2015 report, the IPO and the Departments have expedited this process and will continue the development of these metrics throughout FY 2016 with reporting efforts currently expected to begin by the end of the fiscal year.

CHARTS No.: HOGRC-01-013
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #13

DoD IG Recommendations on Crisis Hotline

Question: Last year, the DOD's Inspector General released a report entitled "Department of Defense Suicide Event Report Data Quality Assessment." That report found that "Crisis line staff were unable to conduct in-depth assessment and provide necessary assistance to service members" because they did not have access to the service members DOD medical records. In 2014, over 3,200 service members called the crisis hotline. Has DOD implemented all of the IG's recommendations in that report as they relate to granting the Military Crisis Line staff access to the relevant military healthcare information? If not, does DOD intend to implement all of the IG's recommendations? What parts of the recommendations has DOD implemented and which parts are either outstanding or will not be implemented?

Answer: The information requested in this question is outside the purview of PEO DHMS and should be addressed to Office of the Under Secretary of Defense for Personnel and Readiness, to which the DoD's Inspector General recommendation was made.

CHARRTS No.: HOGRC-01-014
House Government Reform Committee
Hearing Date: October 27, 2015
Subject: VA and DoD IT: Electronic Health Records Interoperability
Congressman: Congressman Hurd
Witness: Mr. Miller
Question: #14

Encryption

Question: Does the VA encrypt all health care data both at rest and in transmission between VA facilities, private sector providers, DOD and VA care facilities?

Answer: The information requested in this question is outside the purview of PEO DHMS and should be addressed to the appropriate office within the Department of Veterans Affairs.