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EXAMINING THE PROGRESS AND CHALLENGES IN MODERNIZING INFORMATION TECHNOLOGY AT THE U.S. DEPARTMENT OF VETERANS AFFAIRS

HEARING

BEFORE THE

COMMITTEE ON VETERANS' AFFAIRS
UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

SECOND SESSION

JUNE 22, 2016

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EXAMINING THE PROGRESS AND CHALLENGES IN MODERNIZING INFORMATION TECHNOLOGY AT THE U.S. DEPARTMENT OF VETERANS AFFAIRS

WEDNESDAY, JUNE 22, 2016

U.S. SENATE,
COMMITTEE ON VETERANS' AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 2:38 p.m., in room 418, Russell Senate Office Building, Hon. Johnny Isakson, Chairman of the Committee, presiding.

Present: Senators Isakson, Boozman, Cassidy, Rounds, Tillis, Sullivan, Blumenthal, Murray, Brown, Tester, and Hirono.

OPENING STATEMENT OF HON. JOHNNY ISAKSON, CHAIRMAN, U.S. SENATOR FROM GEORGIA

Chairman ISAKSON. I call this meeting of the Senate Veterans' Affairs Committee to order.

Welcome, Dr. Shulkin and Ms. Melvin, for being here today. We look forward to your testimony.

I will make a short opening statement and then refer to Ranking Member Blumenthal to make his. Then, we will go straight to your testimony and hopefully robust questions afterward.

I would at the outset, with the permission of Dr. Shulkin, ask unanimous consent that the letter from Dr. Shulkin to me dated today be entered in the record, which is a good response that I appreciate very much, to this hearing.

[The letter from Dr. Shulkin follows:]

DEPARTMENT OF VETERANS AFFAIRS
Under Secretary for Health
Washington DC 20420

In Reply Refer To: 10

The Honorable Johnny Isakson
United States Senate
Washington, DC 20510

Dear Senator Isakson:

Thank you for your June 14, 2016, letter to the Department of Veterans Affairs (VA) expressing concern about the Department's progress in addressing our health care high-risk areas.

We recognize that addressing the high-risk areas identified by the Government Accountability Office (GAO) is imperative to sustaining the progress we have made and will continue to make. We are working closely with the GAO. Work addressing the five high-risk issues has been underway for over a year, and we will issue a comprehensive strategy to resolve the five areas of concern by August 1, 2016.

In the area of policies, we agree achieving clarity and consistency in all areas of policy development and implementation would be well served if the policy function falls under the purview of the Deputy Under Secretary for Health for Policy and Services. We also acknowledge your concerns regarding "expired" policies and recognize that there is confusion about this term. Although all Veterans Health Administration (VHA) policies are intended to be recertified every 5 years, the recertification date should not be considered an expiration date. The current policy is active until a new policy is published. The purpose of 5-year recertification is to ensure regular review of all of our policies, rather than to establish a date at which a policy is inactive. This has been an informal VHA practice for many years. Therefore, our policies remain in force and are not expired. We have issued consistent guidance to update changes in expected practices in the field.

We are currently engineering a system that will ensure accountability for timely recertification of policy documents, to reduce and ultimately eliminate this problem. In the meantime, we are also issuing clarification to the field that policies do not "expire" when their recertification date has passed, and they should continue to be followed until they are rescinded or reissued. Finally, while much work has been done on this, we will finalize and issue a comprehensive scheduling directive within 30 days.

As we have worked on risk areas identified by the GAO, we have also seen significant improvements in access and quality of care. Through increased hiring, extended hours,

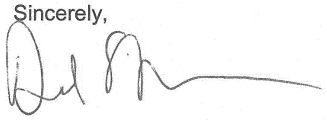
and increased productivity, combined with care provided by community partners, we have delivered the equivalent of 7.4 million hours of clinical care. We are making significant progress on urgent care appointments and implementing same day services in primary care. In addition, using VHA's Strategic Analytics for Improvement and Learning (SAIL) tool, that includes multiple metrics of quality and efficiency, 74 percent of our medical centers have improved in overall quality. As a system, we have seen substantial reductions in hospital mortality (35 percent), leading healthcare-associated infections (52 percent reduction for catheter-associated urinary tract infections; 18-percent decrease in central line infections; and 33-percent reduction in Methicillin Resistant Staphylococcus aureus (MRSA) infections) and a 17-percent reduction in length of stay. Moreover, recently published studies of how VA health care compares with the private sector have revealed VHA's superior performance in the quality of care for cardiac disease and mental health.

Again, we are committed to correcting the deficiencies noted in the GAO High Risk List while continuing to ensure continued improvements in quality and access at all of our medical centers. I appreciate your continued support of our mission and your steadfast support of Veterans. My senior leaders and I would be delighted to brief you or your staff at any time on our continued progress.

Should you need additional information, please have a member of your staff contact Mr. Brendon Gehrke, Congressional Relations Officer, at (202) 461-6490 or by email at Brendon.Gehrke@va.gov.

Thank you for your continued support of our Nation's Veterans.

Sincerely,



David J. Shulkin, M.D.

Chairman ISAKSON. We welcome both of you and thank you for being here. As you well know, because you are both relative newcomers to the Veterans Administration in Washington—in fact, I remember when Senator Blumenthal and I were a part of your confirmation and your rapid ascent to positions of authority, which are to large credit to Bob McDonald. I want to make a side comment if I can right here, that the Veterans Administration (VA) has gotten a lot of criticism and they have earned a lot of it. Yet there have been a lot of things that have happened in the VA, which have been difficult to do that other people could not do that Bob McDonald has done. One of them was, in terms of physicians and medical information technology (IT), bringing two of the best leaders we have in the U.S. Government in Ms. Council and Dr. Shulkin for the work that they are doing.

I think we will hear from the testimony the results of some of that work and how it is paying off, getting them moving in the right direction toward getting off of the High-Risk List. It is not easy to get on it, but once you get on it, it is hard to get off of it, and getting off of it takes a lot of concentration. This is one of the

reasons we are having a benchmark hearing today, because I do not like to let reports sit on my desk, have a hearing, talk about them, and then never talk about them again. I like to come back a few months later and say, what kind of progress are we making, and I think that you both have done a great job in providing leadership to the VA and I know your testimony today will reveal a lot of the changes you have made to address the shortcomings that put the VA on the High-Risk List to start with.

With that said, I would be happy to call on the Ranking Member, Senator Blumenthal from Kentucky—Connecticut. I do not know why I want to say Kentucky.

Senator BLUMENTHAL. I will take Kentucky. [Laughter.]

OPENING STATEMENT OF HON. RICHARD BLUMENTHAL, RANKING MEMBER, U.S. SENATOR FROM CONNECTICUT

Senator BLUMENTHAL. Thank you very much to the panel for being here, most especially thank you to the Chairman for calling this hearing and for enabling us to hear directly from the VA leadership about an issue that has bedeviled the VA and, to some extent, the Department of Defense (DOD), for as long as I have been in the U.S. Senate, which is now close to 6 years. Every time we have raised the issue, we have been assured that it has been solved, and then we come back and ask the same question.

The decades of unsuccessful attempts to establish an electronic health record system compatible across the VA and the DOD have caused hundreds of millions of taxpayer dollars to be wasted in efforts that have been abandoned. As I have said to Secretaries of both the VA and the DOD in a letter I sent earlier in Congress, these kinds of integrated, up-to-date electronic health care records are absolutely critical to ensure that health care providers have access to the health information they need to care for veterans and transitioning servicemembers, and the cost to VA has been very high, both in terms of budget and its credibility and reputation.

As the VA undertakes efforts to transform its IT infrastructure, security has to be a top priority. Security breaches have to be prevented and remedied, because this information is sensitive and personal. I am hopeful that the new leadership that has taken over at the VA—and I join the Chairman in commending the Secretary for bringing into the VA that new leadership—will address these problems with the seriousness they deserve.

So, I thank you very much for being here today.

Chairman ISAKSON. We have two witnesses today: first is Dr. David Shulkin, and we are glad to have Dr. Shulkin join us today from the Veterans Administration; and second is Ms. Valerie Melvin from the Government Accountability Office. We are glad to have you here today. We look forward to hearing from both of you.

I will recognize Dr. Shulkin first for up to 5 minutes.

STATEMENT OF HON. DAVID SHULKIN, M.D., UNDER SECRETARY OF HEALTH, U.S. DEPARTMENT OF VETERANS AFFAIRS; ACCOMPANIED BY HON. LaVERNE COUNCIL, ASSISTANT SECRETARY FOR INFORMATION TECHNOLOGY; LAURA ESKENAZI, EXECUTIVE IN CHARGE AND VICE CHAIRMAN, BOARD OF VETERANS' APPEALS; AND RON BURKE, ASSISTANT DEPUTY UNDER SECRETARY FOR FIELD OPERATIONS, VETERANS BENEFITS ADMINISTRATION

Dr. SHULKIN. Great. Thank you, Chairman Isakson, Ranking Member Blumenthal, Senator Brown, Senator Rounds. Thank you for having us here today.

I am pleased to be with here today, to my left, Assistant Secretary for Information Technology, Hon. LaVerne Council, and to my right, the Executive in Charge and Vice Chairman of the Board of Veterans' Appeals, Ms. Laura Eskenazi, and to her right, the Assistant Deputy Under Secretary for Field Operations for the Veterans Benefits Administration, Mr. Ron Burke.

I do know that the specific focus of today's hearing is on the modernization of information technology and that is really what we want to talk to you about. Yet, I do want to start by acknowledging the recent letter that I did get, Chairman Isakson, from you and many Members of the Senate Committee on Veterans' Affairs dated June 14, where you shared your concerns over access and quality and the pace at which we are making advances in Veterans Health Administration, VHA. I just wanted to let you know, I share your impatience, but I also want to let you all know that we really are making progress and we are making real progress. So, I want to address this just for a second and then get back to IT.

As you know, our top priority has been access and fixing the access crisis. Through extended hours, through productivity, through hiring, new leases, our stand-downs, we have added 7.4 million hours of additional clinical time this past year. Our focus is on those veterans that need clinically prioritized care, and we have seen an 88 percent reduction in urgent consults since November of last year. Forty-six percent of our urgent appointments are done in the same day. We have seen a 20 percent reduction just since February in our most timely needed appointments for veterans. So, we are making real progress.

Our veteran satisfaction data, where we ask veterans, show 90 percent of our veterans using VA are satisfied or completely satisfied with their ability to get an appointment when they want it. And, as you know, we are making real progress with same day services for primary care and mental health. By the end of this year, we will have that in every medical center. So, we are working hard on that.

In community care, the Choice program, in March 2014, we had 370,000 authorizations. That is more than double what we had a year ago. That is going to lead to two million appointments just in March alone. So, we really are making progress there also.

I do really want to thank all of you for your support and leadership in Veterans First Act. That is so important, and I know we have your support. That is going to make the community care systems work much better for veterans, because we know it is still confusing and we want to make it work better than it is right now.

In terms of quality, 74 percent of our medical centers improved quality last year in our Strategic Analytics for Improvement and Learning (SAIL) metrics, our very comprehensive analytic system. We saw a 35 percent reduction in mortality in our hospitals last year. We had a 52 percent reduction in urinary tract infections, an 18 percent reduction in central line infections, and a 17 percent reduction in length of stay. It is not only our data. Recent peer reviewed studies have shown VA health care's quality is better than the private sector in cardiac and in mental health in just two of the peer reviewed publications.

Since launching our Diffusion of Excellence program, our best practices, we now have 160 best practices—we had talked to you about this, Senator Brown—being replicated in over 70 medical centers. An effort like that had never been going on before at VA.

I had mentioned to you I had 35 medical centers without a medical center director just a few months ago, the last time I was before you. We have recently selected 28 medical center directors. So, that is going to leave seven for us to continue. So, we are not done, but we are really making progress in filling the leadership positions. I recognize all of you know how important that is.

So, this is not to say that we should be patted on the back, but this is to say the progress is real. We have a lot to do. I am impatient. We are going to continue at it. But, there really is real progress being made.

Now, on IT, under Ms. Council's leadership, we are building on the legacy on VHA innovation in information technology, and there has never been a better working relationship between technologists and clinicians than there is right now. We are on track to close 100 percent of the Inspector General's IT recommendations by the end of 2017.

In July 2015, we had 267,000 accounts with elevated privileges. That means people who have very open access to VA health care information technology. That number has been reduced by 95 percent. Since March 2015, we have identified 21 million critical vulnerabilities. That is going to make us safer.

Ms. Council has developed new policies to ensure that IT dollars are being spent appropriately. VA continues to outpace our projections on interoperability, so the Joint Legacy Viewer (JLV) has more than 138,000 VA users, and that is more than 4.6 million veteran records are available through the JLV now. Finally, we are progressing with a new plan in the digital health platform that is going to prepare VA for the future in a way that is pretty exciting.

So, Mr. Chairman, Senator Rounds, Senator Brown, thank you again for this opportunity to discuss these programs with you. Our team is here to answer your questions and we look forward to this hearing.

[The prepared statement of Dr. Shulkin follows:]

PREPARED STATEMENT OF DAVID J. SHULKIN, M.D., UNDERSECRETARY OF HEALTH, VETERANS HEALTH ADMINISTRATION, U.S. DEPARTMENT OF VETERANS AFFAIRS

Good afternoon, Chairman Isakson, Ranking Member Blumenthal, distinguished Members of the Committee, thank you for the opportunity to discuss the progress that the Department of Veterans Affairs (VA) is making toward modernizing our information technology (IT) infrastructure to provide the best possible service to our

VA business partners and our Nation's Veterans. I will also discuss scheduling, medical record sharing, and cyber security initiatives at the Department.

I am pleased to be accompanied today by Assistant Secretary for Information Technology and Chief Information Officer, Ms. LaVerne Council, Ms. Laura Eskenazi, Executive in Charge and Vice Chairman, Board of Veterans Appeals, and Mr. Ron Burke, Assistant Deputy Under Secretary for Field Operations, Veterans Benefits Administration.

In order to successfully carry out major IT initiatives and the department's consolidation of community care programs, VA will need a digital health platform and IT solutions that will meet the evolving needs of our Veterans, as well as support our streamlined business processes.

The Veterans Health Administration (VHA) and the Office of Information & Technology (OI&T) are essential partners in delivering quality service to our Veterans. Meeting the demands of 21st century Veterans requires an interconnected system of systems, based on a single platform, which supports an electronic health record (EHR) as one of several components.

IT plays a critical role in enabling care for our Nation's Veterans. VA's current EHR modernization efforts focus on delivering the tools for clinicians to provide more comprehensive, patient-centered care and will support VA's progress to a digital health platform.

We have made substantial progress in delivering new capabilities leveraging VistA, the VA Health System's EHR, while also strategizing for our future needs. While our efforts to modernize the VA's EHR and our plans for the digital health platform are not mutually exclusive; the success of the digital health platform is not dependent on any particular EHR.

VISTA EVOLUTION/INTEROPERABILITY

Current State of VistA Evolution

VistA Evolution is the joint VHA and OI&T program for improving the efficiency and quality of Veterans' health care by modernizing VA's health information systems, increasing data interoperability with the Department of Defense (DOD) and network care partners, and reducing the time it takes to deploy new health information management capabilities. We will complete the next iteration of the VistA Evolution Program—VistA 4—in fiscal year (FY) 2018, in accordance with the VistA Roadmap and VistA Lifecycle Cost Estimate. VistA 4 will bring improvements in efficiency and interoperability, and will continue VistA's award-winning legacy of providing a safe, efficient health care platform for providers and Veterans.

VA takes seriously its responsibility as a steward of taxpayer money. Our investments in VistA Evolution continue to make our Veterans' EHR system more capable and agile. VA has obligated approximately $510 million in IT Development funds to build critical capabilities into VistA since FY 2014, when Congress first provided specific funding for the VistA Evolution program. In addition, VA has obligated $151 million in IT Sustainment funds and $110 million in VHA funds for VistA Evolution. The VHA funding supports the operational resources needed for requirements development, functional design, content generation, development, training, business process change, and evaluation of health IT systems.

It is important to note that VistA Evolution funding stretches beyond EHR modernization. VistA Evolution funds have enabled critical investments in systems and infrastructure, supporting interoperability, networking and infrastructure sustainment, continuation of legacy systems, and efforts—such as clinical terminology standardization—that are critical to the maintenance and deployment of the existing and future modernized VistA. This work was critical to maintaining our operational capability for VistA. These investments will also deliver value for Veterans and VA providers regardless of whether our path forward is to continue with VistA, a shift to a commercial EHR platform as DOD is doing, or some combination of both.

Interoperability

We know that a Veteran's complete health history is critical to providing seamless, high-quality integrated care and benefits. Interoperability is the foundation of this capability as it enables clinicians to provide Veterans with the most effective care and makes relevant clinical data available at the point of care. Access to accurate Veteran information is one of our core responsibilities. The Department is happy to report that, thanks to a joint VA and DOD effort, on April 8, 2016, we jointly certified, to the House and Senate Committees on Appropriations, Armed Services, and Veterans' Affairs that we have met the interoperability requirement of the National Defense Authorization Act for Fiscal Year 2014 (NDAA) Section

713(b)(1). We have not stopped our modernization efforts, as we envision further enhancements that we know are necessary for greater efficiency.

For front-line health care teams, the two most exciting products from VistA Evolution are the Joint Legacy Viewer (JLV) and the Enterprise Health Management Platform (eHMP). JLV is a clinical application that provides an integrated, chronological display of health data from VA and DOD providers in a common data viewer. VA and DOD clinicians can use JLV to access, on demand, the health records of Veterans and Active Duty and Reserve Servicemembers. JLV provides a patient-centric, rather than facility-centric view of health records in near real time. Veterans Benefits Administration (VBA) offices have access to JLV and can use it to expedite claims in certain situations.

As of June 5, 2016, JLV had more than 170,000 authorized users in VA and DOD together, including 109,000 authorized VA users. The team is authorizing several thousand new users in VA each week. Of those VA users, more than 10,000 VBA personnel are authorized to use JLV to help process claims.

The process for granting access to JLV is both simple and secure. JLV allows us to monitor access and usage by capturing logins, records viewed, activities by users, and transactions per hour. In the interest of privacy, security, and safety, JLV is restricted to health care providers and benefits administrators. Beneficiaries cannot access JLV, but this in no way affects their rights to copies of their health records upon request. We simultaneously maintain tight controls over the system and ensure efficient access to clinicians and benefits administrators who need it to do their jobs.

JLV has been a critical step in connecting VA and DOD health systems, but it is a read-only application. Building on the interoperability infrastructure supporting JLV, the Enterprise Health Management Platform (eHMP) will ultimately replace our current read-write point of care application. The current application, called the Computerized Patient Record System, or CPRS, has been in use since 1996. CPRS served VA for many years as an industry leading point of care tool for providers, but it has many limitations for modern care delivery.

eHMP will overcome these limitations, and provide a modern web application and clinical data services platform to support Veteran-centric, team-based, quality driven care. eHMP will also natively support interoperability between VA, DOD and community health partners. We are deploying an initial read only version of eHMP now, and will begin deploying eHMP version 2.0 with write-back capabilities in the second quarter of FY 2017. Clinicians will be able to write notes and order laboratory and radiology tests in version 2.0. eHMP 2.0 will also support tasking for team-based management and communication with improved tracking to ensure follow through on tasks.

Veterans will benefit from eHMP in several ways. For example, eHMP will provide a complete view of a Veteran's health history from all available VA, DOD and community provider sources of information. This will help providers develop a more complete picture of a Veteran's history, enabling better treatment decisions.

The Veteran's voice will also be front and center in eHMP. Veterans' goals and preferences for care will become part of the information all providers see. eHMP will also provide a feature dedicated to recording and maintaining a Veteran's service history, including duty locations and what type of work they performed during their service. This information could then be used to proactively identify Veterans who may be at risk for certain health issues, or eligible for medical care based on locations or times in which they served.

Veterans will also benefit from VA care teams who can work together more efficiently and effectively using the care coordination and task management tools eHMP will provide. For example, if a Veteran is referred for a particular test or consultation with a specialist, workflow management tools in eHMP will ensure the right activities have taken place in advance of the referral. This will help reduce wasted or unneeded appointments, save time for both Veterans and providers. In turn, if providers are more efficient, they are able to serve more Veterans, which will have an overall positive impact on Veteran access to care. All of these efforts align with the goals outlined by the Federal Health Information Technology Strategic Plan 2015–2020 and Connecting Health and Care for a Nation: A Shared Nationwide Interoperability Roadmap, produced by the Office of the National Coordinator for Health Information Technology (ONC) in collaboration with VA, DOD and other partners.

Upon completion, eHMP will support the following capabilities:

• *Veteran-centric health care*—eHMP will allow clinicians to tailor care plans to specific clinical goals and help Veterans achieve their health care goals.

• *Team-based health care*—eHMP will provide an interoperable care plan in which clinical care team members, including the patient, will understand the goals

of care and perform explicit tasks to execute the plan. eHMP will also monitor tasks that are not completed as specified and escalate them to the appropriate team.

• *Quality-driven health care*—eHMP will support the diffusion of best practices, including evidence-based clinical process standardization. eHMP will collect data on how clinicians address conditions and power analytics to generate new evidence for better care and best practices.

• *Improved access to health information*—eHMP will integrate health data from VA, DOD, and community care partners into a customizable interface that provides a holistic view of each Veteran's health records.

Fundamentally, our efforts to improve information systems are about data, not software. Regardless of the software platform, we need to be able to access the right data at the right time. Health data interoperability with DOD and network providers is important—but it is equally important to understand that this is just one aspect of having a comprehensive profile to streamline and unify the Veteran experience.

Using eHMP as a tool, health care teams will better understand Veterans' needs, coordinate care plans, and optimize care intensity in VA and throughout the high-performing network of care.

LOOKING TO THE FUTURE

Modernization is a process, not an end, and the release of VistA 4 in FY 2018 will not be the "end" of VA's EHR modernization. VA has always intended to continue modernizing VA's EHR, beyond VistA 4, with more modern and flexible components.

Technology and clinical capabilities must consistently evolve to meet the growing needs of our Veterans. The VistA Evolution program is just that—an evolving capability that is an invaluable part, but not the end of VA's EHR modernization.

Digital Health Platform

Due to the expansion of care in the community, a rapidly growing number of women Veterans, and increased specialty care needs, the need for more agility in our EHR has never been greater. We are looking beyond what VistA 4 will deliver in FY 2018, and we are evaluating options for the creation of a Digital Health Platform to ensure that we have the best strategic approach to modernizing our EHR for the next 25 years.

The VA healthcare system must keep the Veteran experience at its core and incorporate effective clinical management, hospital operations capability, and predictive analytics. We do not have all of this today with VistA.

To prepare for this new era in connected care, VA is looking beyond the EHR to a digital health platform that can better support Veterans throughout the health continuum. These factors drive the need for continuous innovation and press us to plan further into the future.

The EHR is the central component of the digital health platform. However, an EHR by itself does not have all of the capabilities required to manage care in the community, respond to the changing needs of the Veteran population, support clinical management, and provide the best overall Veteran experience with the VA healthcare system.

We have conducted a business case outlining our vision for the digital health platform. Our goal is to have a modern and integrated health care system that would incorporate best-in-class technologies and standards to give it the look, feel, and capabilities users have come to expect in the private sector.

The digital health platform will be agile, and will leverage international open-source standards such as the Fast Healthcare Interoperability Resources (FHIR) framework. FHIR converts granular health data points into standardized data formats already well known to healthcare IT application developers. The main goal of FHIR is to simplify implementation without sacrificing information integrity. VA is working with standards organizations and industry partners to further refine FHIR to allow the level of interoperability necessary for the functionality described above.

Health Level 7 International (HL7), a not-for-profit American National Standards Institute (ANSI)-certified standards developing organization, developed FHIR. HL7 has produced healthcare data exchange and information modeling standards since its founding in 1987. Emerging industry practices and lessons learned from previous standards frameworks informed HL7's development of FHIR.

The digital health platform will be a system of systems. It is not dependent on any particular EHR, and VA can integrate new or existing resources into the system without sacrificing data interoperability. One of the digital health platform's defin-

ing features will be system-wide cloud integration, a marked improvement over the more than 130 instances of VistA that we have today.

SCHEDULING

We recognize the urgent need for improvement in VA's appointment scheduling system. We are evaluating the Veteran Appointment Request (VAR) application and the VistA Scheduling Enhancement (VSE) through simultaneous pilot programs. We are testing VAR at two facilities. We have been testing VSE at 10 locations, and are in the training phase for national deployment of VSE.

VAR is a new Veteran facing capability allowing Veterans to directly request primary care and mental health appointments as face-to-face, telephone, or video visits by specifying three desired appointment dates. The software allows established primary care patients to schedule and cancel primary care appointments directly with their already-assigned Patient Aligned Care Team provider.

We are testing VAR at two facilities in the VA New England Health System (Veterans Integrated Service Network (VISN) 1)—the VA Connecticut Healthcare System (West Haven) and the VA Boston Healthcare System (Jamaica Plain).

VSE updates the legacy command line scheduling application with a modern graphical user interface. This capability reduces the time it takes schedulers to enter new appointments, and makes it easier to see provider availability. VSE provides critical, near-term enhancements, including a graphical user interface, aggregated facility views, profile scheduling grids, single queues for appointment requests, and resource management reporting.

Our ten VSE Initial Operational Capability sites are:

1. Charles George VA Medical Center in Asheville, NC
2. West Palm Beach VA Medical Center in West Palm Beach, F
3. Chillicothe VA Medical Center in Chillicothe, OH
4. VA Hudson Valley Health Care System in New York
5. Louis Stokes Cleveland VA Medical Center in Cleveland, OH
6. VA New York Harbor Health Care System in New York, NY
7. VA Salt Lake City Health Care System in Utah
8. VA Southern Arizona Health Care System in Tucson, AZ
9. James H. Quillen VA Medical Center in Mountain Home, TN
10. Washington, DC VA Medical Center in Washington, DC.

VA schedulers tell us that they need a system focused purely on scheduling. VSE and VAR pilots are available now and show positive results in meeting the business requirements of our partners. In contrast, the Medical Appointment Scheduling System (MASS) project includes additional features that add complexity, leading us to put MASS on a strategic hold while our team ensures that we meet all requirements without undue processing difficulties. VA will carefully measure the results of the VSE pilot to determine the best use of resources that will meet Veteran needs. VA is working hard to ensure that every technological tool and improvement makes judicious use of taxpayer dollars while providing solutions that support today's Veterans' needs.

ENTERPRISE CYBERSECURITY STRATEGY

OI&T is facing the ever-growing cyber threat head on—we are committed to protecting all Veteran information and VA data and limiting access to only those with the proper authority. This commitment requires us to think enterprise-wide about security holistically. We have dual responsibility to store and protect Veterans records, and our strategy addresses both privacy and security.

In order to achieve and maintain the highest level of security, we need the active participation of everyone who accesses VA systems. We are providing comprehensive education to ensure that all VA employees remain vigilant. We have updated our National Rules of Behavior and our annual security training, and we are emphasizing continuous engagement with our employees. Information security poses constant challenges, and it is only through continuous reinforcement that our employees can support us in this battle.

The first step in our transformation was addressing enterprise cyber security. We delivered an actionable, far-reaching, cybersecurity strategy and implementation plan for VA to Congress on September 28, 2015, as promised. We designed our strategy to counter the spectrum of threat profiles through a multi-layered, in-depth defense model enabled through five strategic goals.

• *Protecting Veteran Information and VA Data:* We are strongly committed to protecting data. Our data security approach emphasizes in-depth defense, with multiple layers of protection around all Veteran and VA data.

• *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.
• *Protecting VA Infrastructure and Assets:* Protecting VA infrastructure requires going beyond the VA-owned and VA-operated technology and systems within VA facilities to include the boundary environments that provide potential access and entry into VA by cyber adversaries.
• *Enabling Effective Operations:* Operating effectively within the cyber sphere 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.
• *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 health care, benefits, and services to Veterans, while delivering on our promise to keep Veteran information and VA data safe and secure.

In addition, we have a large legacy issue that we need to address. In the FY 2017 budget request, VA has increased requested spending on security to $370 million, fully funding and fully resourcing our security capability for the first time. We are committed to eliminating our material weakness in FY 2017, and these funds are enabling those efforts. In addition, VA is investing over $50 million to create a data-management backbone.

IT TRANSFORMATION AND ENTERPRISE PROGRAM MANAGEMENT OFFICE (EPMO)

OI&T is transforming. Persistent internal challenges exist in delivering IT services, and external pressures have compelled us to change and adapt. Through the *MyVA* initiative, VA is modernizing its culture, processes, and capabilities to put Veterans first, and is giving our team the opportunity to make a real difference in Veterans' lives. This momentum is driving us to transform OI&T on behalf of our partners, our employees, and Veterans.

EPMO is building our momentum in OI&T's transformation. EPMO hosts our biggest IT programs, including the Veterans Health Information Systems and Technology Architecture (VistA) Evolution, Interoperability, the Veterans Benefits Management System, and Medical Appointment Scheduling System (MASS). EPMO also supports the Federal Information Technology Acquisition Reform Act (FITARA) requirements.

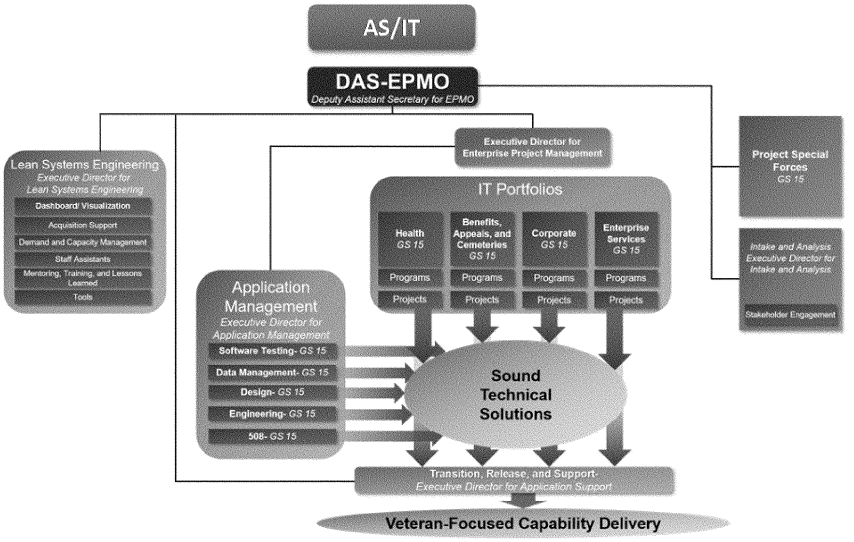


Fig. 1—EPMO Organizational Chart

EPMO ensures alignment of program portfolios to strategic objectives and provides visibility and governance into the programs.

For enterprise initiatives, EPMO helps program and project teams to better develop execution plans, monitor progress, and report the status of these programs and projects. EPMO enables partnerships with IT architects for enterprise collaboration and serves as a program/project resource for the delivery of enterprise and cross-functional programs. This helps identify Shared Services Enterprise Programs and will help plan resource requirements with portfolios and architecture.

EPMO has already produced results. The Veteran-focused Integration Process (VIP) is a project-level based process that replaces the Program Management Accountability System (PMAS). VIP streamlines IT product release activities and increases the speed of delivering high-quality, secure capabilities to Veterans. VIP is revolutionary because it utilizes a single release process—designed to eliminate redundancy in review, approval, and communications—that will be fully implemented by the end of 2016. These releases are scheduled on a three-month cadence—an improvement over the previous six-month standard—and allow greatly needed IT services to be delivered to Veterans more frequently.

VIP reduces overhead and is more efficient and cost effective than PMAS. VIP's efficiencies include reducing the review process from 10 independent groups with 90 people to a single group of 30 people focused on ensuring that products meet specified, consistent criteria for release.

VIP focuses on doing rather than documenting, with a reduction of artifacts from more than 50 to just seven, plus the Authority to Operate, and the shift from a six-month to a three-month delivery cycle. Further, as a guarantee to our work, EPMO will ensure that product teams stay assigned to their projects for at least 90 days after the final deployment.

CONCLUSION

VA is at a historic crossroad and will need to make bold reforms that will shape how we deliver IT services and health care in the future, as well as improve the experiences of Veterans, community providers, and VA staff. Throughout this transformation, our number one priority has and will always be the Veteran—ensuring a safe and secure environment for their information and improving their experience is our goal.

As with all issues, VA strongly values the input and support of all its stakeholders. We realize the vital role they play in assisting us in providing timely, high-quality care to Veterans, and we look forward to continued open dialog.

This concludes my testimony, and I am happy to answer your questions.

Chairman ISAKSON. Thank you, Dr. Shulkin.
Ms. Melvin.

STATEMENT OF VALERIE MELVIN, DIRECTOR OF INFORMATION MANAGEMENT AND TECHNOLOGY RESOURCES ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Ms. MELVIN. Good afternoon, Chairman Isakson, Ranking Member Blumenthal, and Members of the Committee. Thank you for inviting me to testify at today's hearing.

As we all know, the use of information technology is critically important to VA's ability to serve veterans, and each year, the Department spends billions of dollars on information systems and related assets. However, challenges in the Department's management of IT over many years have led to a number of failed initiatives and contributed to our designating VA health care as high-risk.

At your request, my testimony today summarizes our reporting on IT concerns that helped lead to the high-risk designation. It also addresses some of our more recent findings about the Department's management of IT as reflected in various initiatives. These include, as you have mentioned, its exchange of health records with DOD, also the development and use of the Veterans Benefits Management System, VBMS, and the modernization of the Department's health care claims processing system.

Between 2010 and 2014, our work highlighted several critical deficiencies in VA's delivery of its IT projects. These related to the unsuccessful modernization of its approximately 30-year-old outpatient scheduling system after spending an estimated $127 million over 9 years, the suspended development of a system that was to electronically store and retrieve information about surgical implants, and almost two decades of effort toward achieving fully interoperable electronic health records with DOD that remains ongoing.

Across these efforts, we noted persistent weaknesses in the Department's IT management practices. Among others, we noted shortcomings in investment oversight, requirements and risk management, and system testing. We also noted weaknesses in the establishment of goals and measures that are critical to assessing the progress and results of IT projects.

The Department agreed with many of the related recommendations that we made in these areas and noted various steps that it would take to address them. Nevertheless, we have continued to identify management weaknesses which present risk to delivering IT capabilities that effectively support VA's mission.

For example, while it made progress with implementing an initial version of VBMS, we recently noted the need for increased management attention to establishing goals for the system's response times and user satisfaction. In addition, last month, we reported that while the Department had implemented interim measures to address some of the challenges with modernizing its health claims processing system, it lacked a sound plan for the modernization effort.

Further, our recent reporting on VA's efforts to advance electronic health record interoperability with DOD noted that VA had not identified outcome-oriented goals and metrics to clearly define

what it aims to achieve in its efforts with DOD and the value and benefits of these efforts for veterans and health care providers.

Overall, these findings continue to highlight the need for more effective IT management to better position VA to deliver the modernized systems and capabilities necessary to fulfill its mission. And while we recognize that the Chief Information Officer, CIO, has undertaken a transformation effort to mitigate weaknesses, sustained management attention and organizational commitment cannot be stressed enough to ensure that this transformation is successful and that the weaknesses are fully addressed. Your continued Congressional attention also will be essential to help ensure that VA meets its challenge to establish a more rigorous and institutionalized approach to managing and delivering its IT.

This concludes my oral statement and I would be pleased to respond to your questions.

[The prepared statement of Ms. Melvin follows:]

PREPARED STATEMENT OF VALERIE C. MELVIN, DIRECTOR, INFORMATION TECHNOLOGY, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

United States Government Accountability Office



Testimony

Before the Committee on Veterans' Affairs, U.S. Senate

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VETERANS AFFAIRS

Sustained Management Attention Needed to Address Numerous IT Challenges

Statement of Valerie C. Melvin, Director
Information Technology

GAO-16-762T

Chairman Isakson, Ranking Member Blumenthal, and Members of the Committee:

I am pleased to be here today to testify on the Department of Veterans Affairs' (VA) efforts to modernize its information technology (IT). As you know, the use of IT is crucial to helping VA effectively serve the nation's veterans and, each year, the department expends billions of dollars on its information systems and assets.

However, over many years, VA has experienced challenges in managing its IT resources, raising questions about the effectiveness of its IT operations and its ability to deliver intended outcomes needed to help advance the department's mission. We have previously reported on a number of the department's IT initiatives.

As you requested, my testimony today summarizes results from a number of our key reports issued between 2010 and 2014 highlighting IT challenges that have contributed to our designation of VA health care as a high-risk area.[1] It also describes additional challenges that we more recently identified in 2015 and 2016 that are related to increasing the electronic exchange of VA's health records with those of the Department of Defense (DOD), development and use of the Veterans Benefits Management System (VBMS), and the department's modernization of its health care claims processing system.[2]

For this testimony, we relied on our body of work that led to our designation of VA health care as a high risk area in 2015. In addition, we relied on our more recent reports issued since the high risk designation. We also obtained and reviewed information on the department's actions in response to our previous recommendations and the current status of IT management activities. The reports cited throughout this statement

[1]GAO, *High Risk Series: An Update,* GAO-15-290 (Washington, D.C.: Feb. 11, 2015).

[2]GAO, *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); *Veterans Benefits Management System: Ongoing Development and Implementation Can be Improved; Goals Are Needed to Promote Increased User Satisfaction,* GAO-15-582 (Washington, D.C.: Sept. 1, 2015); and *Veterans' Health Care: Proper Plan Needed to Modernize System for Paying Community Providers,* GAO-16-353 (Washington, D.C.: May 11, 2016).

include detailed information on the scope and methodology for our reviews. The work upon which this statement 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

VA's mission is to promote the health, welfare, and dignity of all veterans in recognition of their service to the nation by ensuring that they receive medical care, benefits, social support, and lasting memorials. It is the second largest federal department and, in addition to its central office located in Washington, D.C., has field offices throughout the United States, as well as the U.S. territories and the Philippines.

The department's three major components—the Veterans Benefits Administration (VBA), the Veterans Health Administration (VHA), and the National Cemetery Administration (NCA)—are primarily responsible for carrying out its mission. More specifically, VBA provides a variety of benefits to veterans and their families including disability compensation, educational opportunities, assistance with home ownership, and life insurance. VHA provides health care services, including primary care and specialized care, and it performs research and development to improve veterans' needs. Lastly, NCA provides burial and memorial benefits to veterans and their families.

Collectively, the three components rely on approximately 340,000 employees to provide services and benefits. These employees work in 167 VA medical centers, approximately 800 community-based outpatient clinics, 300 veterans centers, 56 regional offices, and 131 national and 90 state or tribal cemeteries situated throughout the nation.

VA Relies Extensively on IT

The use of IT is critically important to VA's efforts to provide benefits and services to veterans. As such, the department operates and maintains an IT infrastructure that is intended to provide the backbone necessary to meet the day-to-day operational needs of its medical centers, veteran-facing systems, benefits delivery systems, memorial services, and all other IT systems supporting the department's mission. The infrastructure is to provide for data storage, transmission, and communications requirements necessary to ensure the delivery of reliable, available, and

responsive support to all VA staff offices and administration customers, as well as veterans.

Toward this end, the department operates approximately 240 information systems, manages 314,000 desktop computers and 30,000 laptops, and administers nearly 460,000 network user accounts for employees and contractors to facilitate providing benefits and health care to veterans. These systems are used for the determination of benefits, benefits claims processing, patient admission to hospitals and clinics, and access to health records, among other services.

For example, VBA relies on VBMS to collect and store information such as military service records, medical examinations, and treatment records from VA, DOD, and private medical service providers. IT also is widely used and critically important to supporting the department in delivering health care to veterans. VHA's systems provide capabilities to establish and maintain electronic health records that health care providers and other clinical staff use to view patient information in inpatient, outpatient, and long-term care settings. Specifically, the Veterans Health Information Systems and Technology Architecture, known as VistA, consists of many computer applications and modules that collect, among other things, information about a veteran's demographics, allergies, procedures, immunizations, and medical diagnoses.

However, a number of VA's systems are old. For example, our recent report on legacy systems used by federal agencies identified 2 of the department's systems as being over 50 years old and among the 10 oldest investments and/or systems that were reported by 12 selected agencies.[3]

- Personnel and Accounting Integrated Data (PAID)—This 53-year old system automates time and attendance for employees, timekeepers, payroll, and supervisors. It is written in Common Business Oriented Language (COBOL), a programming language developed in the late 1950s and early 1960s, and runs on IBM mainframes. VA plans to replace PAID with a project called Human Resources Information System Shared Service Center in 2017.

[3]GAO, *Information Technology: Federal Agencies Need to Address Aging Legacy Systems,* GAO-16-468 (Washington, D.C.: May 25, 2016).

- Benefits Delivery Network (BDN)—This 51-year old system tracks claims filed by veterans for benefits, eligibility, and dates of death. It is a suite of COBOL mainframe applications. VA has general plans to roll the capabilities of BDN into another system, but there is no firm date associated with this transition.

To address these obsolete systems that are in need of modernization or replacement, we recommended that the Secretary of Veterans Affairs direct the department's Chief Information Officer (CIO) to identify and plan to modernize or replace legacy systems, as needed, and consistent with draft OMB guidance, including time frames, activities to be performed, and functions to be replaced or enhanced. VA concurred with our recommendation and stated that it is planning to retire PAID and BDN in 2017 and 2018, respectively.

In 2014, VA issued its 6-year strategic plan, which emphasizes the department's goal of increasing veterans' access to benefits and services, eliminating the disability claims backlog, and ending veteran homelessness. According to the plan, the department intends to improve access to benefits and services through the use of improved technology to provide veterans with access to more effective care management. The plan also calls for VA to eliminate the disability claims backlog by fully implementing an electronic claims process that is intended to reduce processing time and increase accuracy. Further, the department has an initiative under way that provides services, such as health care, housing assistance, and job training, to end veteran homelessness. Toward this end, VA is working with other agencies, such as the Department of Health and Human Services, to implement more coordinated data entry systems to streamline and facilitate access to appropriate housing and services.

VA reported spending about $3.9 billion to improve and maintain its IT resources in fiscal year 2015. Specifically, the department reported spending approximately $548 million on new systems development efforts, approximately $2.3 billion on maintaining existing systems, and approximately $1 billion on payroll and administration. For fiscal year 2016, the department received appropriations of about $4.1 billion for IT.

Further, for fiscal year 2017, the department's budget request included nearly $4.3 billion for IT. The department requested approximately $471 million for new systems development efforts, approximately $2.5 billion for maintaining existing systems, and approximately $1.3 billion for payroll and administration. In addition, in its 2017 budget submission, the

department requested appropriations to make improvements in a number of areas, including:

- veterans' access to health care, to include enhancing health care-related systems, standardizing immunization data, and expanding telehealth services ($186.7 million);
- veterans' access to benefits by modernizing systems supporting benefits delivery, such as VBMS and the Veterans Services Network ($236.3 million);
- veterans' experiences with VA by focusing on integrated service delivery and streamlined identification processes ($171.3 million);
- VA employees' experiences by enhancing internal IT systems ($13 million); and
- information security, including implementing strong authentication, ensuring repeatable processes and procedures, adopting modern technology, and enhancing the detection of cyber vulnerabilities and protection from cyber threats ($370.1 million).

VA's CIO Has Initiated a Transformation of the IT Organization

VA's CIO has recently initiated an effort to transform the focus and functions of the Office of Information and Technology (OI&T),[4] in response to the Secretary's goal of achieving a more veteran-focused organization. The CIO's transformation strategy, initiated in January 2016, calls for OI&T to focus on stabilizing and streamlining processes, mitigating weaknesses highlighted in GAO assessments, and improving outcomes by institutionalizing a new set of IT management capabilities.

As part of this transformation, the CIO began transitioning the oversight and accountability of IT projects to a new project management process called the Veteran-focused Integration Process in January 2016, in an effort to streamline systems development and the delivery of new IT capabilities. The CIO also intends to establish five new functions within OI&T:

- The enterprise program management office is to serve as OI&T's portfolio management and project tracking organization.

[4]OI&T provides IT services across VA and manages the department's IT assets and resources. The office is headed by VA's CIO.

- The account management function is to be responsible for managing the IT needs of VA's major components.
- The quality and compliance function is to be responsible for establishing policy governance and standards and ensuring adherence to them.
- The data management organization is expected to improve both service delivery and the veteran experience by engaging with data stewards to ensure the accuracy and security of the information collected by VA.
- The strategic sourcing function is to be responsible for establishing an approach to fulfilling the agency's requirements with vendors that provide solutions to those requirements, managing vendor selection, tracking vendor performance and contract deliverables, and sharing insights on new technologies and capabilities to improve the workforce knowledge base.

According to the CIO, the transformation strategy is expected to be completed by the first quarter of fiscal year 2017, although the vast majority of the plan, including establishing the five new functions, is to be executed by the end of fiscal year 2016.

IT Challenges Contributed to Designation of VA Health Care as High Risk

In February 2015, we designated VA health care as a high-risk area. Among the five broad areas contributing to our determination was the department's IT challenges.[5] Of particular concern was the failed modernization of a system, suspended development of another system, and the extent of system interoperability—the ability to exchange information—with DOD, which present risks to the timeliness, quality, and safety of VA health care.

We have reported on the department's failed attempts to modernize its outpatient appointment scheduling system, which is about 30 years old. Among the problems cited by VA staff responsible for scheduling appointments are that the system requires them to use commands requiring many keystrokes and that it does not allow them to view multiple

[5]The remaining four areas are ambiguous policies and inconsistent processes, inadequate oversight and accountability, inadequate training for VA staff, and unclear resource needs and allocation priorities.

screens at once. Schedulers must open and close multiple screens to check a provider's or a clinic's full availability when scheduling a medical appointment, which is time-consuming and can lead to errors.

In addition, we reported in May 2010 that after spending an estimated $127 million over 9 years on its outpatient scheduling system project, VA had not implemented any of the planned system's capabilities and was essentially starting over by beginning a new initiative to build or purchase another scheduling system.[6] We also noted that VA had not developed a project plan or schedule for the new initiative, stating that it intended to do so after determining whether to build or purchase the new application. We recommended that the department take six actions to improve key systems development and acquisition processes essential to the second outpatient scheduling system effort. The department generally concurred with our recommendations, but as of May 2016, had not addressed four of the six recommendations.

Further, in January 2014, we reported that the inability to electronically share data across facilities had led VA to suspend the development of a system that would have allowed it to electronically store and retrieve information about surgical implants (including tissue products) and the veterans who receive them nationwide.[7] Having this capability would be particularly important in the event that a manufacturer or the Food and Drug Administration ordered a recall on a medical device or tissue product because of safety concerns. In the absence of a centralized system, at the time of our report, VA clinicians tracked information about implanted items using stand-alone systems or spreadsheets that were not shared across VA facilities, which made it difficult for the department to quickly determine which patients may have received an implant that was subject to a safety recall.

Additionally, we reported in February 2014 that VA and DOD lacked electronic health record systems that permit the efficient electronic

[6]GAO, *Information Technology: Management Improvements Are Essential to VA's Second Effort to Replace Its Outpatient Scheduling System,* GAO-10-579 (Washington, D.C.: May 27, 2010).

[7]GAO, *VA Surgical Implants: Purchase Requirements Were Not Always Followed at Selected Medical Centers and Oversight Needs Improvement,* GAO-14-146 (Washington, D.C.: Jan. 13, 2014).

exchange of patient health information as military service members transition from DOD to VA health care systems.[8] 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 heath data repositories, and jointly develop a single integrated system.

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 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 Interagency Program Office (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. The departments stated that they would ensure interoperability between these updated systems, as well as with other public and private health care providers. Our February 2014 report noted that the departments did not substantiate their claims that it would be less expensive and faster than developing a single, joint system.[9] We have 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.[10] We

[8]GAO, *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).

[9]GAO-14-302.

[10]See GAO's Action Tracker, a publicly available website that includes progress updates and assessments of the actions from GAO's annual reports on reducing fragmentation, overlap, and duplication.

therefore recommended that the departments should 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 were 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 June 2016, the departments have not provided us with a comparison of the estimated costs of their current and previous approaches. Moreover, 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.

Recent Evaluations Have Identified Additional IT Challenges

To further highlight the department's IT challenges, our most recent report in August 2015 on VA's efforts to achieve electronic health record interoperability with DOD noted that the departments have engaged in several near-term efforts focused on expanding interoperability between their existing electronic health record systems.[11] 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.[12]

[11]GAO-15-530.

[12]The Joint Legacy Viewer provides a real-time, integrated, categorized, and chronological view of electronic health record information contained in existing VA and DOD systems. For example, it allows both departments to share certain healthcare data (e.g., patient demographics, allergies, medications) in a viewable interface that is available to clinicians.

In addition, VA and DOD have moved forward with plans to modernize their respective electronic health record systems. For its part, 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 in September 2014, and was to include access to the Joint Legacy Viewer, among other things. VA's CIO has asserted that the department has continued to improve VistA. However, the CIO also recently indicated that the department is taking a step back in reconsidering how best to meet VA's future electronic health record system needs and has not determined whether to modernize VistA or to replace it with an off-the-shelf system.

Nevertheless, a significant concern that we identified 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 our prior work, 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.

In our August 2015 report, we stressed that using an effective outcome-based approach could provide VA with a more accurate picture of its progress toward achieving interoperability with DOD and the value and 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 record systems are achieving interoperability, and update IPO guidance accordingly. VA concurred with our recommendations and has told us that it has initiated actions in response to them.

Efforts to Develop and Use the Veterans Benefits Management System Can Be Improved

In September 2015, we reported that VBA had made progress in developing and implementing VBMS, its system that is to be used for processing disability benefit claims.[13] Specifically, it had deployed the initial version of the system to all of its regional offices as of June 2013. Further, after initial deployment, VBA continued developing and implementing additional system functionality and enhancements to support the electronic processing of disability compensation claims. As a result, 95 percent of records related to veterans' disability claims are electronic and reside in the system.

Nevertheless, we found that VBMS was not able to fully support disability and pension claims, as well as appeals processing. Specifically, while the Under Secretary for Benefits stated in March 2013 that the development of the system was expected to be completed in 2015, implementation of functionality to fully support electronic claims processing was delayed beyond 2015. In addition, VBA had not produced a plan that identified when the system will be completed. Accordingly, holding VA management accountable for meeting a time frame and for demonstrating progress was difficult.

As VA continues its efforts to complete the development and implementation of VBMS, we reported in September 2015 that three areas could benefit from increased management attention.

- Cost estimating: The program office did not have a reliable estimate of the cost for completing the system. Without such an estimate, VA management and the department's stakeholders had a limited view of the system's future resource needs, and the program risked not having sufficient funding to complete development and implementation of the system.
- System availability: Although VBA had improved its performance regarding system availability to users, it had not established system response time goals. Without such goals, users did not have an expectation of the system response times they could anticipate and management did not have an indication of how well the system performs relative to performance goals.

[13]GAO-15-582.

- System defects: While the program had actively managed system defects, a recent system release included unresolved defects that impacted system performance and users' experiences. Continuing to deploy releases with large numbers of defects that reduce system functionality could adversely affect users' ability to process disability claims in an efficient manner.

We also found in our September 2015 report that VA had not conducted a customer satisfaction survey that would allow the department to compile data on how users view the system's performance, and ultimately, to develop goals for improving the system. GAO's 2014 survey of VBMS users found that a majority of them were satisfied with the system, but decision review officers were considerably less satisfied. Although the results of our survey provided VBA with data about users' satisfaction with VBMS, the absence of user satisfaction goals limited the utility of survey results. Specifically, without having established goals to define user satisfaction, VBA did not have a basis for gauging the success of its efforts to promote satisfaction with the system, or for identifying areas where its efforts to complete development and implementation of the system might need attention.

In our September 2015 report, we recommended that VA develop a plan with a time frame and a reliable cost estimate for completing VBMS, establish goals for system response time, minimize the incidence of high and medium severity system defects for future VBMS releases, assess user satisfaction, and establish satisfaction goals to promote improvement. As we stressed in our report, attention to these issues can improve VA's efforts to effectively complete the development and implementation of VBMS. Fully addressing our recommendations, as VA agreed to do, should help the department give appropriate attention to these issues.

Modernization of Health Care Claims Processing System Requires Additional Planning to Ensure Weaknesses Are Addressed

As we reported in May 2016, VA's expenditures for its care in the community programs, the number of veterans for whom VA has purchased care, and the number of claims processed by VHA have all grown considerably in recent years.[14] The substantial increase in utilization of VA care in the community programs poses staffing and workload challenges for VHA, which has had ongoing difficulty processing claims from community providers in a timely manner.

VHA officials and staff at three of the four claims processing locations we visited told us that limitations of the existing IT systems, including the Fee Basis Claims System (FBCS) that VHA uses for claims processing, have delayed processing and payment of claims for VA care in the community services. Officials at the sites we visited described the following limitations.

- VHA cannot accept medical documentation electronically.
- Authorizations for VA care in the community services are not always readily available in FBCS.
- FBCS cannot automatically adjudicate claims.
- System weaknesses have delayed claims payments.

The officials we interviewed said that if the agency is to dramatically improve its claims processing timeliness, comprehensive and technologically advanced solutions must be developed and implemented, such as modernizing and upgrading VHA's existing claims processing system or contracting out the claims processing function. In October 2015, VHA submitted a plan to address these issues as part of a broader effort to consolidate VA care in the community programs.[15] The agency estimated that it would take at least 2 years to implement solutions that would fully address all of the challenges now faced by its claims processing staff and by providers of VA care in the community services.

[14]GAO-16-353.

[15]Department of Veterans Affairs, *Plan to Consolidate Programs of Department of Veterans Affairs to Improve Access to Care*, (Washington, D.C.: Oct. 30, 2015). The VA Budget and Choice Improvement Act required VA to develop a plan for consolidating its existing VA care in the community programs. The plan was due to Congress no later than November 1, 2015. Pub. L. No. 114-41, § 4002, 129 Stat. 443, 461 (2015).

However, VHA has not yet provided to Congress or other external stakeholders a plan for modernizing its claims processing system. In particular, VHA has not provided (1) a detailed schedule for developing and implementing each aspect of its new claims processing system; (2) the estimated costs for developing and implementing each aspect of the system; and (3) performance goals, measures, and interim milestones that VHA will use to evaluate progress, hold staff accountable for achieving desired results, and report to stakeholders the agency's progress in modernizing its claims processing system.

That VHA has not yet provided a detailed plan but has stated that it expects to deploy a modernized claims processing system as early as fiscal year 2018 is cause for concern. Thus, to help provide reasonable assurance that VHA achieves its long-term goal of modernizing its claims processing system, we recommended in May 2016 that the Secretary of Veterans Affairs direct the Under Secretary for Health to ensure that the agency develops a sound written plan that includes:

- a detailed schedule for when VHA intends to complete development and implementation of each major aspect of its new claims processing system;
- the estimated costs for implementing each major aspect of the system; and
- the performance goals, measures, and interim milestones that VHA will use to evaluate progress, hold staff accountable for achieving desired results, and report to stakeholders the agency's progress in modernizing its claims processing system.

The department concurred with our recommendation and said that VHA plans to address the recommendation when the agency develops an implementation strategy for the future consolidation of its VA care in the community programs.

In conclusion, effective IT management is critical to the performance of VA's mission. The department faces challenges in key areas, including the development of new systems, modernization of existing systems, and increasing interoperability with DOD. While we recognize that the transformation of VA's IT organization is intended, among other things, to mitigate the IT weaknesses we have identified, sustained management attention and organizational commitment will be essential to ensuring that the transformation is successful and that the weaknesses are fully addressed.

Chairman Isakson, Ranking Member Blumenthal, and Members of the Committee, this completes my prepared statement. I would be pleased to respond to any questions that you may have.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions about this testimony, please contact Valerie C. Melvin at (202) 512-6304 or melvinv@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony statement. GAO staff who made key contributions to this statement are Mark T. Bird (Assistant Director), Jennifer Stavros-Turner (Analyst in Charge), Kara Epperson, Rebecca Eyler, and Jacqueline Mai.

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Chairman ISAKSON. Thank you, Ms. Melvin.

Let me start with you if I can. Yesterday when I left this meeting, or another hearing we had in anticipation of this meeting today, a reporter from a technology publication whose name I cannot remember now stopped me in the hall and asked me if I would answer a couple of questions. One of the questions asked was, was I aware of any bad purchases of equipment or software that the VA had made in terms of technology.

My answer to them was, you know, I made a lot of dumb mistakes when I ran my company and we went through the IT revolu-

tion, and I was sold some stuff that ended up not doing what it needed to do. To the extent that you have looked at the VA, do they have a good process of evaluating their needs and purchasing their equipment in terms of technology equipment?

Ms. MELVIN. I think over the years that we have looked at VA's IT, they have had processes in place to assess and evaluate their information technology needs. What we found, though, were gaps in terms of their ability to really collaborate with the business side and know fully what those needs are and then to carry them through to fruition in terms of development.

We have identified concerns through the course of our work relative to the current practices, if you will, or the lack of practices within the IT shop for making sure that they have the right—a sound investment process and the ability to carry through and deliver on the investments that they undertake.

Chairman ISAKSON. I think you just hit on something I experienced in my business. A lot of times, I have bought technology equipment and IT equipment that my people really did not want, or if they got it, they did not know how to use it, and I suffered from a lot of not getting the people who were going to use the equipment to be a part of the decision in which equipment to buy. Do you know whether or not VA has a process to involve the rank and file employees with the decisions it has made in terms of equipment or a technology or software they buy?

Ms. MELVIN. From what we understand, through the transformation initiative that the CIO is undertaking, there are steps now being put in place to have a more rigorous process of collaborating with the business side. I would say that over the course of the work that we have done in the past, that has been an area of concern, especially when it came to requirements, defining requirements and really knowing what needed to be in place and to carry through to get those systems developed.

Chairman ISAKSON. Thank you very much, Ms. Melvin.

Ms. Council, I told you when we had our little meeting before this meeting that the Georgia Institute of Technology, which is an institution in my State that I could not get into, but a lot of smart people that are engineers go to, wrote me a letter about how impressed they were with your work with them on the interoperability program called Fast Healthcare Interoperability Resource (FHIR) that they are developing at Georgia Tech. I understand you all are close to an agreement on that. Is that correct?

Ms. COUNCIL. Yes, sir, in support of our new digital health platform. One of the things that we wanted to provide was a proof of concept that our business partners could actually take, use, and understand what this platform really is about and what is the problems it can solve.

Chairman ISAKSON. And the main thing that software does is interpret between softwares that do not talk to each other otherwise, is that not correct?

Ms. COUNCIL. Yes, and it actually allows for greater innovation in area health care. So, what it is is FHIR is the Fast Health Interoperable Resource. You can bring that resource in an open source environment, use it, try it out, and if it does not work, you spin it back out. So it is all leveraging software as a service.

Chairman ISAKSON. Well, in my humble opinion, interoperability of medical IT is the single biggest problem in health care today——

Ms. COUNCIL. Mm-hmm.

Chairman ISAKSON [continuing]. As a 71-year-old male that goes to the doctor quite frequently. [Laughter.]

Whether on Epic or Greenway or whatever it might be, all these red flags go up if you get in one that it is on the other. So, I think what you are doing is on the leading edge of what the entire medical IT industry is going to do, am I correct?

Ms. COUNCIL. Yes. Actually, the digital health platform has been said to be on the bleeding edge but the cutting edge in leveraging software as a service, the cloud, and also engaging in a non-infrastructure-based concept so that we can be much more agile, much more future ready, and only one instance at all times available to our friends in VHA.

Chairman ISAKSON. Dr. Shulkin, in your testimony, and I did not write it down so I am going on quick memory here, but you rattled off a number of areas where you had reduced the infection rate and a number of problems that had plagued the VA and referred to your best practices evaluation of urinary tracts, colonostomies, things of that nature. Do you have a discipline system you go through now to make sure you are avoiding errors to the maximum extent possible and reinfection rates in your hospitals?

Dr. SHULKIN. Yeah. Mr. Chairman, I think VA has for some time been a leader in the country in patient safety and in systems to measure and evaluate outcomes. And, so, we have a very, very robust system, but the credit for this really needs to go to our clinicians, who have understood the importance of infection reduction, the importance of patient safety and quality. These types of improvements, the numbers that I rattled off, are really extraordinary advances in quality.

Chairman ISAKSON. The reason I brought it up, and my time is going to be up, so I am not going to ask another question, but in Georgia, at Augusta VA about 5 years ago, we had two deaths and a number of infections from improper sterilization of colonostomy equipment that they finally corrected by putting in some new best practices in that hospital. I hope you are doing that throughout the system to make sure we minimize compounding problems by getting people that are already sick coming in our facilities and leaving sicker.

Dr. SHULKIN. Well, one of the reasons why we are on the GAO High-Risk List and one of the reasons why this is one of my top priorities is that in many VAs, we are doing world class care, but not all VAs. So, we are trying to ensure those best practices are consistent across the enterprise, which is one of our major areas of focus right now, implementing these as an integrated system, not as individual VAs.

Chairman ISAKSON. Thank you for your testimony.

Senator Blumenthal.

Senator BLUMENTHAL. Thanks, Mr. Chairman.

I would like to ask about the impact of lack of cooperation between the Department of Defense and the VA. As I mentioned in my opening statement, we have been assured repeatedly that both agencies are cooperating with each other, which somehow defies

credibility, because if that is so, there would have been interoperability or the issues would have been solved long ago. So, let me ask you, Ms. Melvin, who bears the responsibility here and what is happening?

Ms. MELVIN. I place the responsibility on both Departments and primarily on the leadership of those Departments in terms of being able to establish up front what it is that the Departments want to achieve in the way of interoperability.

A longstanding concern that we have had with interoperability is in terms of defining what interoperability is supposed to be. We have not been able, over the years, to really get from either agency what they mean in terms of full interoperability, what that end state is supposed to be in the way of the technology that exists, and how that technology is used.

So, as we have looked at this over the years, we have had a lot of discussions with both VA and with DOD. We have had a lot of assurances along the way that that was being taken care of. But what we consistently see is a lack of—really, a lack of clear planning and the clear definition of what it is and then how they plan to implement measures and goals to get there.

Senator BLUMENTHAL. What can—what would you recommend that we do on this Committee, and the U.S. Senate generally, to make sure that there is interoperability?

Ms. MELVIN. I think in the immediate—right now, I would say that there are a lot of—we have made a lot of recommendations to both VA and DOD. We are still following up to see where they are in the process of addressing those. But we also know that they are in the midst of a number of changes to the approach that they are taking.

We have had a lot of concerns and questions relative to the fact that both Departments are essentially going down separate tracks with their modernization efforts, for the Department of Veterans Affairs and the AHLTA (Armed Forces Health Longitudinal Technology Application) system within DOD. We know that they intend to have interoperability.

I think from the standpoint of your role at this point is continued oversight, continued pressing for answers and explicit discussion and details relative to what the plans are, how interoperability is to be defined at its fullest, and how the agencies intend to progress and measure their progress toward getting there.

Senator BLUMENTHAL. Ms. Council, my information is—well, actually, it is the VA's monthly information security report for April 2016—about 2,556 veterans were affected by incidents of data breach. That number is about six times the number reported by the VA 1 year before that, in March 2015. What accounts for the increase?

Ms. COUNCIL. I would have to look at the data that you have. What I do know is that about 24 percent of any of the mishandlings that we have are mismailings, which is data—the letters that have gone out in the wrong envelope to a veteran who should not have received. So, 41 percent of those are mishandling or mismailing. The other parts of the situation around, umm, things that we look at like privacy violations, policy violations, unencrypted devices, those are where we really take a very, very

diligent look and ensure that we are tightening up that kind of access to any of the veterans' information.

So, to date, for fiscal year 2016, that is what we are basically seeing, which is actually about 20 percent lower than it was the year before.

Senator BLUMENTHAL. What is 20 percent lower?

Ms. COUNCIL. The number of mismailings and misappropriation and mishandling of veteran——

Senator BLUMENTHAL. Well, we are not really talking about mismailings. We are talking about data breaches.

Ms. COUNCIL. The actual number——

Senator BLUMENTHAL. I understand that a mismailing can cause a data breach——

Ms. COUNCIL. It is considered a data breach, yes, sir.

Senator BLUMENTHAL. If something is sent to the wrong address, how can that happen? Do you not—how can you send a letter to the wrong address?

Ms. COUNCIL. That is actually a process within the business. It is not an IT process. But, because I am the CIO, I am responsible for all data, and any data that is misused and mismanaged or moved to the wrong place, and also having responsibility for privacy, it falls with us. But, it is not——

Senator BLUMENTHAL. No, I understand that, but here is my question. You have got records.

Ms. COUNCIL. Mm-hmm.

Senator BLUMENTHAL. You do mailings and communications to veterans over a period of years. It is not like somebody sits down for that letter and scribbles out something. It comes from a system that has been mailing consistently. How does it all of a sudden get the address wrong?

Ms. COUNCIL. Generally, the system is not doing the mailing. There is a manual interface with a human error. There is a human interface—there is a human——

Senator BLUMENTHAL. So, you are saying that somebody is sitting there and actually typing out an address on an envelope?

Ms. COUNCIL. I am saying that envelopes come together and the paper is put into an envelope by a human being and sent away, yes. It is not mechanized.

Senator BLUMENTHAL. This sounds like very low-tech——

Ms. COUNCIL. Very low-tech.

Senator BLUMENTHAL. Eminently addressable and correctable.

Ms. COUNCIL. Yes, sir.

Senator BLUMENTHAL. What is being done?

Ms. COUNCIL. One of the things that we are looking at with the VBMS and working with them, and I will refer to Mr. Burke on this, is changing that process, because right now, when it occurs, it is not something that IT itself created, but we feel real responsible to correct it.

Senator BLUMENTHAL. Well, these kinds of data breaches, and if they are rising sixfold over just a year, really have to be addressed right away. And, we are not talking here about some sophisticated hacking operation.

Ms. COUNCIL. Mm-hmm. No.

Senator BLUMENTHAL. But it is equally dangerous and damaging to privacy.

My time has expired, so thank you, Mr. Chairman.

Chairman ISAKSON. Thank you, Senator Blumenthal.

Senator Rounds.

HON. MIKE ROUNDS, U.S. SENATOR FROM SOUTH DAKOTA

Senator ROUNDS. Thank you. It sounds like they need a window envelope. [Laughter.]

Dr. Shulkin, in my homestate of South Dakota, we have a large number of veterans who rely on the VA's care in the community programs. As you are aware, health records interoperability is very important in making these programs succeed. A lot of the problems with providers not being paid on time in my State stem from difficulties transferring records back and forth between the VA and the providers.

I am glad that in March VA changed the rules to allow providers to be paid before receiving the records back, and that has most certainly helped. It seems to me, though, that moving forward, some type of commercial health record would be a good solution. I understand that in its draft report, the Commission on Care recommends that the VA purchase and deploy an off-the-shelf electronic health record. I also understand you have various proposals on the future of VA health records currently before you and that you are making those considerations now.

Can you tell me a little bit about where you are at or where you stand on the issue and where you see the VHA going in the future to better interact with private sector providers?

Dr. SHULKIN. Yes. Yes. I would just say three quick points. Number 1 is that the health information exchanges that you talked about, the electronic exchange of information with the community and VA, is the way we need to go. We currently have an HIE, a Health Information Exchange, working with 721 hospitals, 10,000 clinics, and thousands of providers, but that is, as you know, a minority of the providers.

Senator ROUNDS. Is that a proprietary system or is that an off-the-shelf?

Dr. SHULKIN. That is an off-the-shelf system, yes. So, we are encouraging more providers that do a lot of business with the VA to join this effort through our HIE.

Second, as you said, we are not paying our providers fast enough, but we did suspend the fact that they have to give us their information before they get paid. So, we are working hard to pay our providers within 30 days, and that is a commitment that we have, to get better at that.

Third on the commercial systems and where we are going with the future recommendations, this is something that LaVerne's shop has been taking the lead on, and Ms. Council, as the CIO, has the lead on this, but she has been very collaborative with us as the customer and we have come to a point that we have reached consensus that very much agrees with where the Commission on Care is on this, which is that looking at a commercial product is probably the way to go, but we need to do this in a way that incorporates our ability to integrate with community providers in all of

the unique needs of veterans. So, that is what Ms. Council is referring to when she talks about the digital health platform that actually takes those recommendations but does something that I think will really be the way that VA needs to go in the future.

Senator ROUNDS. Ms. Council, I know that one of Secretary McDonald's breakthrough priorities for 2016 is to transform the VA Office of Information Technology, and the stated goal is to ensure 50 percent of IT projects are on time and on budget. Halfway through the year, do you feel that you are on pace to meet that target? And I also note that one of Secretary McDonald's stated goals for 2016 is to close 100 percent of current cybersecurity weaknesses. Where do you currently stand in that effort?

Ms. COUNCIL. So, we are on point to do exactly what the Secretary has laid out. Our plan is that we will have addressed all Federal Information Security Modernization Act (FISMA) findings. By the end of 2016, we would have closed about 30 percent of what the IG expects us to close. And then by the end of 2017, 100 percent eliminating the things that were identified in 2015 as material weaknesses.

As far as the on-time 50 percent, we have deployed our new Enterprise Portfolio Management Office, or EPMO. The EPMO actually is giving us a reduction in overhead of 80 percent on the work that we do, which means we should be able to do our work 50 percent faster. We will be fully using agile processes, so you will have access to your solution much quicker than what was happening before, and so the 50 percent should be totally doable and we are on track.

Senator ROUNDS. Current cybersecurity weaknesses, you expect that you will meet that goal?

Ms. COUNCIL. We are. The material weakness that we have been identified as in the 2015 audit process, we are scheduled and have planning and on schedule to meet and close those out at the end of 2017 in totality.

Senator ROUNDS. I recently read that the VA has spent more than $1 billion developing and maintaining the Veterans Benefits Management System, the VBMS, since 2009. I note that the VA requested an additional $290 million for VBMS in fiscal year 2017, all for a system that was initially projected to cost $579 million. Can you tell me where you are, currently stand with the VBMS, and where you see the costs heading with this system.

Ms. COUNCIL. Mr. Burke and I spoke about this. I am going to refer the question over to him, because the team, working with the leadership, is making a pivot and really looking at tying in to VBA and modernizing the VBMS effort.

Mr. BURKE. Thank you, sir. The development cost of the initial e-folder for VBMS was approximately $560 million, but six different scope changes approved by Congress to create a processing solution that better served VA employees led to an increased expenditure.

By the end of fiscal year 2016, VA will have spent $1.3 billion to create, implement, and maintain VBMS. It is important to note that this investment has been central in reducing the claims backlog by more than 88 percent, from a high point of 611,000 to a little less than 75,000. During that time, VBA also achieved an accuracy

rate of 96 percent at the medical level issue, lowered the claims inventory by 59 percent, and the days pending for each claim from a peak of 282 days to 91 days. VBMS is also in the process, in accordance with one of the GAO recommendations, of providing a plan that would take us into a next generation phase.

We have benefited from the agile environment in VBMS, which really gets to one of the points that was raised earlier. Our end users, we have a process in place where the end users get their product faster. They have input into the development of the product. So, while the expenditure does bring us to $1.3 billion by the end of this year, I think we have been able to show some of the benefits from the amazing support we have received.

Senator ROUNDS. Thank you.

My time has expired. Thank you, Mr. Chairman.

Chairman ISAKSON. Thank you, Senator Rounds.

Senator Hirono.

HON. MAZIE K. HIRONO, U.S. SENATOR FROM HAWAII

Senator HIRONO. Thank you, Mr. Chairman.

The modernization and the interoperability of medical records, et cetera, it has been such an ongoing challenge. I realize that VA's health care system is huge, so there are a lot of moving parts and all that, but we continue to ask what happens to the money and where are the results and all that and you generally come in and tell us that things are going well or much better. But, it is pretty much an ongoing conversation that we have on the same issues.

I note that in Ms. Melvin's testimony, on page seven of her testimony, she says that the GAO recommended that the Department take six actions to improve key systems development and acquisition processes essential to another effort to deal with the outpatient scheduling system. The Department generally concurred with our recommendations, but as of May 2016, which was not very long ago, had not addressed four of the six recommendations.

So, this is a question for you, Dr. Shulkin. Why not, and do you have plans to address the remaining—well, the majority of the GAO recommendations? Do you know what I am referring to? It does not——

Dr. SHULKIN. No.

Senator HIRONO [continuing]. Cite what the recommended actions are——

Dr. SHULKIN. Are you referring to the GAO High-Risk List——

Senator HIRONO. Yes.

Dr. SHULKIN [continuing]. Or are you referring to IT recommendations from the GAO?

Senator HIRONO. Apparently, it is in the—it is a section of your testimony, Ms. Melvin, that has to do with the High-Risk List. Maybe you can enlighten us a little bit more as to what those recommendations were and the fact that the administration has not met four of them.

Ms. MELVIN. I would just like to clarify. Were you talking about the scheduling system we——

Senator HIRONO. Yes.

Ms. MELVIN. OK.

Senator HIRONO. Outpatient scheduling.

Ms. MELVIN. The outpatient scheduling——

Senator HIRONO. That is just one, but let us focus on that.

Ms. MELVIN. Yes. That is one in which we had six recommendations that related to the acquisition management, systems testing, progress reporting for that initiative, and so we at this point are noting, I believe, that we have closed one recommendation as implemented, one as not implemented, and four remain open that relate to implementing requirements management plan for the development and management of the system, analyzing requirements, that type of thing. And we have also got recommendations that relate to policies and procedures for establishing meaningful oversight in terms of having a robust collection method for information on project costs, benefits, and schedules. So, those remain open at this point.

Ms. COUNCIL. So, we have actually——

Senator HIRONO. I asked the wrong person, then.

Ms. COUNCIL. No, no problem. The enterprise portfolio management process is actually creating a control tower. We stood this process up in February. We went and got approval from the unions in April. And, in fact, my Deputy Assistant Secretary for that effort is behind me here. We have stood up that effort, which actually provides us with a new intake process, replacing our Project Management Accountability Software (PMAS) process with a better and focused integration process which will allow us to understand benefits, ensure that the security is built in at the beginning of the process. It is an agile process. And it also gives us a warranty period on the back end of the process. So, it addresses all of those issues in those recommendations, as well as improves our ability to deliver and improves the quality of what we deliver.

Senator HIRONO. So, Ms. Melvin, now that you have heard the response, you would maybe change your testimony to reflect that they are meeting your recommendations?

Ms. MELVIN. What I would say is that we are cautiously optimistic. We would like to see more of the evidence. We will be talking more with the CIO's shop to understand more fully what they are doing. It is encouraging in terms of overall, what is being said, but I would reserve judgment until we have had a chance to really evaluate more. We do like hearing them say they are on the track that they are on, though, toward addressing these matters.

Senator HIRONO. Did you want to add something?

Ms. COUNCIL. Yeah. And just to clarify, what Ms. Melvin said on her timing was 2010 to 2014. We came in with these changes in mid-2015 and we have not had a review of the 2015 to now, and so that is one of the reasons that, you know, it is sort of not linking, because she was well before any of these new changes have been made.

Senator HIRONO. Because the VA is such a huge system, I personally look to the GAO to point out areas where improvement needs to occur, and I think it is really important for the administration, VA, to respond in an appropriate way to address the concerns.

Since the Secretary is very focused on a veteran-focused agency, how are you making sure that the veterans in our various communities, many of who live in rural areas and they may not have ac-

cess to the computer, how do you—your efforts to communicate changes, requirements, the Choice program and all that, what kind of feedback are you getting from the veterans as to, well, it provided—assuming they even know that they should ask? I am very concerned about the information that our veterans are getting regarding what you all are doing and whether you are responding to those concerns. And, I am running out of time, but maybe you can respond really briefly with a commitment to improve.

Dr. SHULKIN. Well, I think it is more than a commitment. I think, as you said, the Secretary has made it clear that our customer is the veteran and we need to change our systems to be veteran-centric. And in order to do that, you have to ask your customers in the way that you are describing, Senator. We have multiple, multiple surveys. We have created groups. We rely upon our Veterans Service Organizations. We rely upon you. You give us a lot of feedback from your constituents. And, we are answering our e-mails directly. We are out there talking to veteran groups. Several of you have asked me to join you at meetings where we have met with veterans.

So, I think that we are getting—we always need to do a better job at getting feedback, but there is that commitment that currently exists.

Senator HIRONO. Well, I may want to just talk with you on the side regarding a particular need that is happening in one of the islands that has veterans, so we will talk with you. Thank you.

Thank you, Mr. Chairman.

Chairman ISAKSON. Thank you, Senator Hirono.

Senator Boozman.

HON. JOHN BOOZMAN, U.S. SENATOR FROM ARKANSAS

Senator BOOZMAN. Thank you, Mr. Chairman, and again, thank you for the hearing.

Dr. Shulkin, we have talked a little bit about some of the problems in the VA pharmacy, and I know you are working hard to try and correct some of those. An example would be that VA pharmacies are not networked and when a veteran visits multiple providers or moves their home to a new location, or even goes on a trip away from their primary care manager, the veteran has to start over with a new doctor's appointment and obtain an entirely new prescription to fill an existing prescription. There also is not deconfliction or adequate monitoring of drug-to-drug interactions or prescription duplications.

Can you talk a little bit about what you are trying to do in the VA pharmacy to alleviate, really, some pretty basic problems?

Dr. SHULKIN. Right. I think, Senator, you have identified the problems that we know exist in the VA very, very well. We have created a technology solution called OneVA Pharmacy that we are implementing across the system that really addresses almost everything that you have talked about. This should be just like other network pharmacies, that when you walk in, all that information is available and we can service people. That is our commitment. The IT solution is being implemented.

And I do not know, do you have a specific date for the implementation of OneVA Pharmacy? Here is the date. In December of this year, it will be completely up to be able to support that.

Senator BOOZMAN. Good. No, that is great. We hear a lot about, rightfully so, about opioids and stuff, so an integrated system theoretically probably would help with that, also, so that is good.

Ms. Melvin, you highlighted in your testimony that the VA currently has two systems that are over 50 years old. The Personnel Accounting Integrated Data System, which automates time and attendance for employees, is 53 years old. The Benefits Delivery Network that tracks claims by veterans for benefits eligibility, dates of death, is 51 years old. Both use programming language developed in the 1950s. I think you also said that of 12 agencies or whatever, these are in the top ten oldest government——

Ms. MELVIN. Yes, they are. Yes.

Senator BOOZMAN. Can you talk a little bit about the importance of these? I guess, talk a little bit how we get ourselves in this situation where we have got two things that are fairly critical, and yet, again, go back to the 1950s.

Ms. MELVIN. I think it is important to emphasize that there always has to be continual monitoring and updating of systems. There always has to be a focus on whether those—when those systems reach a point at which it is time to retire them, if you will, or get new ones to replace them in whatever form or fashion. And what we have found over time is that there has been a lot of focus on maintaining and operating older systems. It really comes down to the prioritization in many instances of whether those systems are being given the priority, being looked at in the way that they should be for determining when they should be retired.

So, across the work that we have done, where we have had an opportunity to look at those systems, our concerns that we raised there were with the need to really start focusing on bringing them current, reshifting the emphasis, if you will, to putting focus on the development of newer technology, and understand—or taking a position or having a plan for how to transition them from the operational state that they are in.

Senator BOOZMAN. So, that is not really newer technology, though. I mean, it is kind of going from the old to the modern era. I mean, it is beyond that, almost.

Ms. MELVIN. Yes. It could be new technology, but it is also looking at what you have got in place, thinking ahead at all times, and really being cognizant of what you need to do relative to supporting your mission on a broader encompassing basis. And what we found is that oftentimes, the focus gets on just maintaining what is there without really having the vision or the forward thinking view of what needs to be done to really bring this into a more modernized capability as the environments change and needs change.

Senator BOOZMAN. Ms. Council, can you give us kind of a—or whoever—give us a path forward——

Ms. COUNCIL. Sure.

Senator BOOZMAN [continuing]. On how we are going to fix that, and then also maybe a detailed timeline as to when we are going to get it accomplished.

Ms. COUNCIL. Sure. Senator Boozman, what you are really referring to is what is referred to as the software development life cycle. Every bit of software, every system has a life. Forty, 50 years is ancient in the world of IT, and fundamentally, I cringe when I think about that, because at the end of the day, you are working with something that very few people can even tell you what it actually does and does well.

Generally, what should happen is—and what we plan to do—is our Chief Technical Officer would own that as a life cycle and look at every bit of applications we have, every bit of software we have, and really define the legacy and what we should be taking out of the environment. Everything that runs does not necessarily means it needs to still be there, and you need to eliminate those systems, take them down, which means you end the life. You also need to plan well in advance those systems that you are going to replace and think about technology in a very different way, moving away from a hardware mentality to one where you are really focused on the right software linked with the right processes.

So, as we try to be more efficient, ensure that we do not have some of the issues we mentioned, like earlier with the mismailings, those kinds of things, we change our processes. Therefore, we change our systems. So, our plan is that we would have an SDLC, a software development life cycle, that will clearly let everyone know what is going to startup, what is going to be put end of life, and where we are going with our architecture. That is a mainstay of a good organization in IT and it is something that we are deploying in our environment, as well.

Senator BOOZMAN. Thank you, Mr. Chair.

Chairman ISAKSON. Thank you, Senator Boozman.

Senator Tester.

HON. JON TESTER, U.S. SENATOR FROM MONTANA

Senator TESTER. Thank you, Mr. Chairman.

I want to thank you all for being here today. Dr. Shulkin, you came from Johnson and Johnson (J&J), right?

Dr. SHULKIN. No.

Senator TESTER. You came from Johnson and Johnson? You came from——

Dr. SHULKIN. I was running private hospitals in——

Senator TESTER. OK. I just got you mixed up.

Ms. COUNCIL. That happens.

Senator TESTER. All right. So, how long—you have been at the VA for how long, Dr. Shulkin?

Dr. SHULKIN. July 6, a year.

Senator TESTER. It will be 1 year come July 6?

Dr. SHULKIN. It will be 1 year.

Senator TESTER. And how about you, Ms. Council?

Ms. COUNCIL. July 6, 1 year.

Dr. SHULKIN. We are a package team. [Laughter.]

Senator TESTER. Well, that is good. So, you guys kind of came from the private sector.

Dr. SHULKIN. We both did.

Senator TESTER. Yeah. And, so, does the private sector have these kind of problems with IT? I mean, I came out of the State

legislature. We had a program we spent hundreds of millions of dollars on. I get here. It does not matter if it is the VA or any other agency within government. It is like these guys have got a bag and it is Halloween and they are filling it up full of money and taking it out the door and we are not getting much for it. Is this the same thing that happens in the private sector?

Dr. SHULKIN. It is, only bigger, yes.

Senator TESTER. It is worse?

Dr. SHULKIN. No. We have a bigger problem because our numbers are bigger. But, these same—you know, when you implement IT, it is not a magical solution. You actually have to know what you want the IT to do.

Senator TESTER. Yeah.

Dr. SHULKIN. And you have to use your workflow processes to improve it.

Senator TESTER. Yeah.

Dr. SHULKIN. So, we are experiencing the same problem that happens all throughout health care, and——

Senator TESTER. Yeah, but you guys are all smart people. I mean, you have set up—do you not set up your goals and your plans and then you contract with somebody who is a smart person and knows IT, right——

Dr. SHULKIN. Yeah.

Senator TESTER [continuing]. And they come in and they develop it. Are these contracts open-ended that every time you make a change, it is another hundred-million bucks?

Dr. SHULKIN. Senator Tester, I will tell you, I truly believe this is a new VA. I think, as Senator Boozman said, some of these problems date back——

Senator TESTER. No, no——

Dr. SHULKIN [continuing]. Years and years——

Senator TESTER. No doubt about it, but——

Dr. SHULKIN [continuing]. And I am watching—I am watching business being done differently. The processes that LaVerne is putting in place, I think, are much smarter and will allow us to get much greater benefit out of our IT expenditures.

Senator TESTER. I farm in the biggest county in Montana.

Dr. SHULKIN. OK.

Senator TESTER. I would own that county and six or eight more if I had all the money just that VA spent on IT. It is an amazing thing, and I do not know what the solution is, because, quite frankly, I think it is necessary, but every dollar you spend on IT is one less dollar that goes to the veteran.

Ms. COUNCIL. That is correct, and coming out of private industry, that is the reality, is a bottom line cost. And, so, the——

Senator TESTER. But is there not any way that you can put controls and demand accountability and make sure that if you want a product, they give you the product you want, and that every time you adapt that product a little bit to make it meet the needs of the agency, they do not soak you?

Ms. COUNCIL. You are a hundred percent correct, and you will see at each of your places is an update of what we have done over the last year, and it is all about getting those controls in place. The reality is, if you are going to buy a product, you do not customize

a product. You move your processes to do what the product needs to do——

Senator TESTER. Right. So——

Ms. COUNCIL [continuing]. And that is a big part of it.

Senator TESTER. So, let me ask, and I hesitate to ask this question because I should probably know the answer, but I do not. Is the DOD and the VA, are their medical records streamlined? Can they go back and forth without any problems?

Dr. SHULKIN. I would not go that far, but we do have—we do have a working joint viewer that has 170,000 active users between DOD and VA. We certified interoperability in April of this year. People today are using it to get information between DOD and VA, so it works.

Senator TESTER. Is it helping with the claims process, I mean, because it would seem to me that if you guys know what went on in theater and it transfers——

Dr. SHULKIN. It is.

Senator TESTER [continuing]. Seamlessly, it should reduce that number——

Dr. SHULKIN. Ten thousand of those users work for Veterans Benefits Administration. They are using it every day to access DOD records.

Senator TESTER. So, let me ask you about, since the Choice program has come in, we have got hospitals—not as many as we are going to have, by the way, when we pass the Veterans First Act and we get all this mess cleaned up—but we have got a lot of different hospitals. I think the last hospital I was at, they said there were 13 different medical record programs in the State of Montana alone.

So, what are you doing there? And, I know it is not just your problem, but it is just your problem, because we are talking about the veterans and we are talking about shipping them out to the private sector. Those folks have to have those medical records. You get the drift. You know the rules.

Ms. COUNCIL. So, with DOD, we have actually mapped 25 different domains so that we can be very interoperable on the data side, and using the HIE, which is health interchange that Dr. Shulkin mentioned. That is how the information goes in and out seamlessly. Everyone is working, and National Coordinator for Health Information Technology (ONC) is part of this, to make sure we are all talking the same language, it is not two languages, so that the doctors do not have a burden put on them, but they can clearly respond into our system.

Senator TESTER. OK.

Ms. COUNCIL. That is a big part in this digital area.

Senator TESTER. OK. I wanted to get into telemedicine, but I am out of time.

I just want to say that I think back to when we rolled out the Affordable Care Act Web site and what a disaster that was in 2010, 2012—2012, I guess it was, maybe 2010. And they had a bunch of kids at Stanford—I think it was Stanford, but it might have been MIT or it might have been the University of Great Falls—that were playing cards and had it figured out in about 3 or 4 days. Are we utilizing some of these bright young people that are in the uni-

versity system to help save us money, because, honest to God, there is so much money going out the door——

Dr. SHULKIN. Yeah.

Senator TESTER [continuing]. In this IT stuff, it blows my mind.

Dr. SHULKIN. Well, first of all, we are. We do have a lot of members of the Digital Health Service, which are really people who sound exactly like what you are talking about, who have come into government from some of these startup companies and other great IT companies to help. We are using them. We are doing hack-a-thons. We are trying to be creative.

I think right before you came in, the Chairman mentioned that Ms. Council is doing a relationship with Georgia Tech; again, another great IT school that is going to help us solve some of these problems. So, we are not beyond asking for help.

Senator TESTER. OK. That is good. And, by the way, I do not mean this to be critical of you guys, but I guess it is, but if I was in your boat, you would be critical of me if you were in mine, and that is that we have got to figure out some way to get these information technologies tricked out without it breaking the bank. And, I honestly think we are being taken advantage of in a big, big way. That is just my opinion sitting from the outside looking in. Thanks.

Chairman ISAKSON. Thank you, Senator Tester.

Senator Tillis.

HON. THOM TILLIS, U.S. SENATOR FROM NORTH CAROLINA

Senator TILLIS. Thank you, Mr. Chair.

I think I will pick up where Senator Tester left off. I think one thing that we have to recognize, is having been involved in large system transformations in my job and companies like J&J and Procter and Gamble, the difference there that we have to recognize is we have to stabilize the operating environment. When you go in and you do a large-scale IT and process transformation, the first thing you do is you—and you cannot do it unless the chief executive officer (CEO) says, everything stops. Stabilize the situation. Inventory the complexity. Prioritize the systems and processes that have to be changed, then start weaving in out-stage priorities.

What you have here, though, is a group of people who continue to lop on, and I am talking about me and other Members of Congress, saying, by gosh, you better get that done. It better be on time and on budget. And here is a wholly new program we want you to implement within the resources that you have. There is no additional appropriation.

Any executive that made that proposition in any Fortune 100 company would be fired the next day if they had a CEO who was enlightened in trying to turn the business around. So, part of what we have to do is recognize we are part of the problem.

Now, the flip side of that, if you take a look at the maverick IT spend, I think you made some comments about, oh, IT is hard to deal with so people do their own things. You have to reach a point in time inside the VA, if anybody else is spending money on net new IT that is outside of your purview, they should be fired because they are creating complexity that should not be there. If anybody is arguing to keep these five or six duplicative systems within a certain VISN that do fundamentally the same thing, you wanted

it one, they should be fired because you have to start simplifying things.

Even if we stabilize the environment, and we know that is not going to happen as long as Congress keeps on coming back every couple of months, then we also have to recognize the people, process, technology, and time implications of other things that we ask you to do, which is why I have asked the VA to put together a construct that we can start getting our members to think about so that we may get to a point to where rather than saying this will be implemented on this date, this will be implemented within the construct of the overall transition strategy. If we do not, we are never going to get out of this mess. We will be saying the same things like have been said by Senator Tester and people that sat in these chairs long before any of us were ever here.

But, you all have to be more assertive about when someone comes up with a well-intentioned idea that is disruptive to the core mission that you are trying to solve. If you do not, I will guarantee you, you will not be successful.

So, if we have this framework—it goes beyond just Congressional Budget Office (CBO) scoring. It goes beyond Senator Tillis saying that is a great idea.

Let me tell you how many people will be required, how many processes will be affected, how much time, and how much technology will have to be directed at implementing this within the timeframe you have asked me to implement it. Then, hopefully, build a dialog to where we are not disruptive. If we do not do that, you will make some progress, but you will not make a whole lot.

And, if you had a CEO that could wave a wand and shut all of us up and not create any additional uncertainty in terms of your budget—you commit to a budget, you execute to it, manage the prices, like Senator Tester said, you can do that through supply chain and sourcing—then it is still going to take you 3–5 years to get to measurable, significant progress. If you all made a few good steps in 12 months, 18 months—your short-term or quick hits—that would be great. We need to have a session talking about those very specific things, particularly around scheduling, chart movement, and, really, the integration with the DOD is child's play compared to what you need to do with the non-VA providers and Choice providers. You all know that. That is a key piece.

I think you all have got to do a better job of talking about when we are putting proposals in place that are good ideas, but fit squarely in the critical path, it is on you. It is our problem if you communicate it in a direct way. Say, it is not about policy, it is about disruption to this core mission that we have been assigned. Then, we are going to continue to spin these wheels and you will not be near as successful as you were at J&J and at Beth Israel and places you were before. It is just not going to happen.

One question I had around IT compliance is to what extent—when we went into these projects and we had to stabilize things, we were pretty draconian with the business managers and the maverick IT shops out in the operation, and you did not get one pass. If we saw you acquiring or bringing in a consultant under a different account and basically coming up with shadow IT, you lost your job because you were a threat to the underlying mission that

we have all agreed is right for the enterprise. Is there that sort of mentality in the VA right now and that sort of authority and accountability in the VA right now?

Ms. COUNCIL. Yes. We are finalizing an IT/non-IT policy to make it very clear what is IT and what should be paid for and under support and supervision of IT. Also, our device policies, how many and what we are going to allow. We have created portfolios for each of the business groups in which they now have to be responsible for the work on the portfolio and actually putting projects on hold or stopping them because we need to focus to get that work done. The objective will be, if you want something done, you have got to take something else off. You have got to learn how to make tradeoffs so we can complete the job.

So, the whole concept of being agile is that we are going to be getting things done, not having these projects that last forever, and owning that process is Office of Information and Technology (OI&T).

Senator TILLIS. Well, Ms. Council, you know, I supported your nomination and I think you have a great background. I think you can do the job if we do not add to the impediments that will allow you to do it and that you continue to ask for the authority you need to implement some discipline that has not been evident in the VA for quite some time. That is why you had this hairball. I would like to meet maybe with you to talk about your governance model and specific examples of where you have had to apply it and assert that governance to areas in the organization.

Thank you, Mr. Chair.

Chairman ISAKSON. Thank you, Senator Tillis.

Senator Murray.

HON. PATTY MURRAY, U.S. SENATOR FROM WASHINGTON

Senator MURRAY. Thank you, Mr. Chairman.

Dr. Shulkin, let me just say, I was really disappointed by the VA and DOD's decision to abandon the Joint Integrated Electronic Health Care Records System back in 2013. A fully integrated system would have provided VA and DOD with an opportunity to really lead the health industry.

I was equally frustrated to hear earlier this year that VA is announcing a new review now of how to proceed with implementing an improved electronic health record. The decision of whether to use an upgraded version of VistA for the long term or to purchase a commercial product should have been settled years ago. And fundamental questions like whether to use an open source approach should also have been resolved. And, I am really concerned by the lack of long-term planning and whether the time and money invested so far will really be for nothing. What has changed in the Department's thinking that would lead you to walk away from VistA?

Dr. SHULKIN. First of all, I appreciate you being so direct about your disappointment, because I certainly think that given the amount of time that you have spent on this Committee and efforts on this, I can understand that.

LaVerne came in, really, with a charge to take a look at these systems and to give her assessment, given her experience, about

where VA needs to go. The first thing that she did was to reach out and to partner with the customers, all of us. And, so, we have really taken that very seriously, which is to say, look, we came in without as much history, but we came in with the goal of making the right decision for VA in the future, because we do not want to find ourselves, like Senator Boozman said, 50 years down the road with outdated technology. We have been working on that concept.

I do not think that anything that we are working on, which, as you know, right now, taking VistA and Enterprise Health Management Platform (E-HMP), which is really—instead of having 130 separate versions of an electronic medical record, which we have today, creating a single version in E-HMP. We do not believe any of that work is going to go to waste or that money has been wasted. We are looking at a transition plan that brings VA into a future state of where all health care is going to need to be, and that is this issue of interoperability with community providers, with VA, with DOD.

I am going to let LaVerne talk more about that, but we appreciate your perspective on this and we are really trying to do the right thing here.

Ms. COUNCIL. I think, at the end of the day, there was a lot of care to focus on that, because I have a lot of respect for the VistA product. But, the VistA product is a 40-year-old product, and when we start to think about the care to the veteran and the clinical management, the clinical operations management, the fact that key analytics are needed to understand if we are really showing meaningful use, and then ultimately getting us to the point that we can really engage the veteran where they are, not where we need them to be. It required us to look at how we are moving data, how we are doing analysis, how we are using the clinical information, how we are using our supply chain, how we are getting the pharmacy aligned, all those things.

So, as we started to go through it, said, what can technology do today that it could not do yesterday, and it can do a lot. And, so, we have laid out as a digital platform that we will take advantage of what technology can do on behalf of the veteran, but also on behalf of the community, because the care in the community, the number of women veterans now added into the process, as well as the aging of the veteran population and the mobility of the veteran, requires that our tools, our insight, and our engagement with them change.

So, what we have laid out is really a platform that we actually have gotten insight from the Office of the National Coordinator for Health Information Technology (ONC), other industry heads, as well as the DOD. We meet with the DOD. I engage with the DOD leadership. There is no animosity or issue there and they have been very helpful as we start thinking about that process.

Senator MURRAY. Except that we have been hearing that for a very long time, so——

Ms. COUNCIL. I——

Senator MURRAY. Excuse my skepticism, because I have sat here and heard that over and over again. I want you to be successful, but we have heard the same words over and over again. Now it is

going to be integrated. Now we are talking to DOD. So, I wish you the best, but we really do need results.

I am out of time and I want to ask you very quickly about cybersecurity. In 2016 alone, we have seen several alarming attacks on hospitals, where patients' records have been held ransom——

Ms. COUNCIL. Mm-hmm.

Senator MURRAY [continuing]. By cyber criminals. With this push toward telehealth and electronic health records and all of that, talk to me about some steps that you are taking to collaborate with U.S. Department of Health and Human Services (HHS) and other agencies to secure patient data and health IT against cyber attacks.

Ms. COUNCIL. The ransomware, we actually had the interface with it. You were not aware of it because we were able to address it from an IT perspective and correct it quickly. We did alert, as we normally would when one of those things happens, but it did come into the—try to come into the environment. We were well prepared for it.

And, upon my arrival, the first thing we did was create an enterprise cyber strategy process and new strategy because it was critical. We have ten new domains, including medical cyber, which was not part of the things that we looked at. And we also focused on cybersecurity around the internet of things, which is also something we were not looking at.

So, at this point, when we talk about the material weakness, U.S. Department of Homeland Security (DHS) is our partner along with the National Institute of Standards and Technology (NIST) and the various other agencies that we work with. We have been very collaborative with them. DHS has been doing penetration tests for us and giving us feedback on where our opportunities are, and we want to leverage whatever they are doing real time. And, so, I am real pleased that they have been there for us.

Senator MURRAY. OK. And, finally, really quickly, are we on track to get the IT done for caregivers, the caregivers program?

Ms. COUNCIL. Yes, as far as I am aware. Yes.

Senator MURRAY. All right. And, if you can give me—I have got a few other questions I want to get to you all. Thank you.

Chairman ISAKSON. Thank you, Senator Murray.

Senator Sullivan.

HON. DAN SULLIVAN, U.S. SENATOR FROM ALASKA

Senator SULLIVAN. Thank you, Mr. Chairman, and I appreciate the panel's focus on these important issues today. I just am trying to get a bit of the sense of the job that you have, Secretary Council. I know it is a big job, a big undertaking. When you talk about interoperability, it is a great word, but, of course, it means a lot. How many different technology systems exist within the VA?

Ms. COUNCIL. Over a thousand.

Senator SULLIVAN. A thousand?

Ms. COUNCIL. Uh-huh.

Senator SULLIVAN. And how many of those are currently talking to each other?

Ms. COUNCIL. Oh, very few, if any. I would have to come back and look at that. But, integration really does not happen at a sys-

tem level. Integration happens at the data level and that is one of the reasons that we are putting in enterprise data management function, because we did not have one.

Senator SULLIVAN. So, are you trying to integrate the over a thousand systems, as well, IT systems?

Ms. COUNCIL. You do not try to integrate the systems. You work with the data, and the data is key.

Senator SULLIVAN. In terms of the interoperability with the DOD and the providers, what are the biggest challenges there?

Ms. COUNCIL. The biggest challenge is that within health care, there is no common language of interchange. Right now, if you are on a particular EHR, you can talk maybe to the data out of the EHR, and I say maybe. It requires the mapping that was done between the DOD as well as ourselves, and that is what we have done to be able to say we are interoperable with the DOD.

Senator SULLIVAN. Do you try to sequence that first at the VA, then at the DOD, and then within the provider community, or are you trying to do that simultaneously, all the three different areas?

Ms. COUNCIL. Actually, we work with the ONC as the oversight body to decide on what those standards are and then work with all the partners to create that standard and then get that agreement.

Senator SULLIVAN. Let me ask, on the budget, I think that the number I saw was $4.3 billion with regard to the IT budget. My understanding is the IG is currently investigating the potential misuse of funds of up to $60 million. Who makes the final decisions on expenditures like this and how are you combating waste?

Ms. COUNCIL. Well, there is a combination. As far as combating waste, one of the things that we are doing is putting in a full implementation of Federal Information Technology Acquisition Reform Act (FITARA), which creates a source selection process being with the CIO. So, we are putting a sourcing function within OI&T so that we can clearly have an understanding of all the contracts that are going on, all the spend, and also the performance.

Senator SULLIVAN. Do you believe you have a good understanding of that right now?

Ms. COUNCIL. Not what I would like to have, no.

Senator SULLIVAN. So, who does make that decision, those kind of decisions, and is it made in, like, levels, so $5 million goes to this decision level, is made by an assistant secretary, $60 million, maybe the under secretary? Who is responsible, because as you know, on accountability issues, sometimes with big organizations everybody is responsible and nobody is responsible. Sometimes, it is—actually, I think it is actually very important that it be able to have an individual responsible.

Ms. COUNCIL. I totally agree with you and that is actually what FITARA says. It says that the CIO should be accountable as the source selection authority. What——

Senator SULLIVAN. So, is that you?

Ms. COUNCIL. What we have done in OI&T is we delegate our source selection authority to a group called the TAC, which is the acquisition center, to do that purchasing and all those things and they have first right of refusal on those items. What we are doing right now is working with the leader of that organization to refine

that and bring that back into our processes so we can be fully accountable for every dollar spent out of the appropriation.

Senator SULLIVAN. So, on the $60 million the IG is looking at right now, who is responsible for a number in that kind of magnitude?

Dr. SHULKIN. Senator, that particular IG report was talking about VHA, so that would be within VHA, or me. That, as you may or may not know, because there was recent press coverage on this, was actually not a finalized IG report. It has not been released, but it got, essentially, leaked out into the press and so that is how we learned about this.

VHA deliberately took steps to spend the money that it did, with legal counsel's opinion on this. So, we will not—after we see the report first, we will review it carefully, but likely not concur that that was a correct conclusion, that the money was misappropriated.

Senator SULLIVAN. Dr. Shulkin, so it is you when it is VHA?

Dr. SHULKIN. Mm-hmm. Yes.

Senator SULLIVAN. And Secretary Council, when is it you? Again, I am trying to look for names, not to—I just think it creates more accountability.

Dr. SHULKIN. Sure.

Ms. COUNCIL. The IG report is a VHA report, I think, to Dr. Shulkin's point. But for IT appropriation and IT spend, and when it is development dollars and infrastructure dollars, it should be the CIO.

Senator SULLIVAN. You?

Ms. COUNCIL. It is me.

Senator SULLIVAN. Good. OK.

Thank you, Mr. Chairman.

Chairman ISAKSON. Thank you, Senator Sullivan.

Ms. Eskenazi, I hate to have you come and spent the whole afternoon——

[Laughter.]

Chairman ISAKSON [continuing]. And not be asked a question, and with being on the Veterans' Appeals Board, you are probably the person to ask this question. I understand the White House has sent to the agency a reform of the appeals process, is that correct?

Ms. ESKENAZI. Umm——

Chairman ISAKSON. Or that you are working on a reform of the Veterans' Appeals——

Ms. ESKENAZI. Yes. We are working on legislative reform for the appeals process, correct.

Chairman ISAKSON. How close are you to completing that, and has it been scored yet?

Ms. ESKENAZI. My understanding is that there is an informal scoring that has been offered, but we do not govern the CBO Office. But, our position is that the legislation itself is cost neutral and will actually save money in the long run.

Chairman ISAKSON. We are still going to need that score.

Ms. ESKENAZI. Indeed. Uh——

Chairman ISAKSON. Pass that along to Secretary McDonald and Sloan Gibson and the others, if you would.

Ms. ESKENAZI. Certainly, and we hope that the Congressional—we know that we have provided the Congressional Budget Office

with all the information they have requested, and informally, I understand that they agree that it is cost neutral. But, the formal score has not been provided to Congress yet, so——

Chairman ISAKSON. Senator Sullivan.

Senator SULLIVAN. Mr. Chairman, if I may, just to follow up on your question——

Chairman ISAKSON. Sure.

Senator SULLIVAN. So, you might know that I introduced a bill that was a pilot program that dealt with appeals, and I know we have been working closely with the VA on that, and I know the VA is looking at a broader appeals reform. Can you talk about the differences, if you are familiar with what we have been working on with your staff, because one of the concerns I have is we would love to reform the whole program, because I think everybody recognizes that the appeals process needs to be reformed.

One of the concerns is when—you know, I think we have seen it, certainly we have seen it with the Choice Act—that when you undertake a massive reform, that it can have some kind of unintended consequences that people were not—that none of us really thought about, and then it can kind of, in some ways, create more damage than the good it is meant to do.

So, can you just talk about kind of the idea of a pilot, which we certainly do not want to be less ambitious, but we want to essentially test drive the idea before we go into a full-fledged, full-monty reform process that might solve everything, but might also create more problems than it solves.

Ms. ESKENAZI. Certainly, a very fair question. The two ideas are substantially different. The pilot that is in the draft bill is something that was initiated a number of years ago and is something that offers a slight modification in the current system for volunteers who wish to enter that.

As we looked at this more closely in recent time, with full participation by all the major VSOs and other stakeholders, together, we designed a much different type of a framework that would be beneficial for all appellants in the future, and it is something that would offer a much more timely, transparent, yet still fair process for all veterans, unlike the pilot, which was just kind of a sampling, making a few modifications in the existing system, but it is not going to have—the more we have looked at this, it is not going to have that measurable lift that we see that we really need in the appeals process.

The appeals process is broken. What we have presented to this Committee is something that is a collaborative process. It really has some ideas that had never been part of the process in the past, such as the protection of that original effective date and offering veterans more options with the idea of trying to resolve the matter at the earliest point in the process while still offering opportunity for veterans to come back. So, what we have is something that really could change the landscape for all veterans into the future, whereas the pilot is really not going to make a substantial difference.

So, that is kind of the major differences that we see. We are really hopeful that—I know there is a concern that it has been developed quickly, but the people that have been working on these ideas

have—are experts in the area and have really been talking about this for many, many years. I mean, frankly, going back 20 years, you can find documentation of the same discussions.

Senator SULLIVAN. So, you are confident that that, if it were implemented across the board in a very broad fashion, that working the kinks out of that system is not going to be something that you are worried about that could overwhelm its intended benefits?

Ms. ESKENAZI. I am very confident that this is the best design that I have seen in all the years that I have been working on this. And again, I do not think any one person can claim ownership in this design. It was a team effort, which is what makes it all the more strong. And I think that it really will offer a wonderful experience for veterans into the future.

The current system is broken. It is never ending. And we are just going to—it is going to continue to get worse if we do not take action.

Senator SULLIVAN. Thank you, Mr. Chairman.

Chairman ISAKSON. Well, thank you, Senator Sullivan, and I appreciate your chiming in because your recommendation in the Veterans First bill, which we incorporated in that legislation the pilot program, was designed particularly to do exactly what you outlined, and that is develop a program, get the bugs out of it, and implement it across the system and have a better response.

I might also add that it did not come up during the hearing, but we have 450,000 pending appeals that are still backlogged in the system, which is untenable for an organization of veterans like we have. So, we want to—not only do we want to put in a system that works, we do not ever want to be in a situation where we grow to a 450,000-person backlog before we do it. It is my understanding that the recommended changes that are going to be recommended to us at some point in time will not deal with the 450,000 backlog. It will just deal with appeals in the future. Is that correct?

Ms. ESKENAZI. That is correct. We have two separate issues. We have changing the system for the future, and that is the reform that is in Senator Blumenthal's draft bill. And then we have a plan that we have been developing with the VSOs on managing the current inventory of appeals that were filed under the current legal framework.

Chairman ISAKSON. Are you not glad I did not let you get away without asking the question? [Laughter.]

Well, tell them back home we are still concentrating on the veterans' appeal process and we are going to do everything we can to facilitate improving that.

I want to thank all of you for coming today and being a part of the hearing, and unless there is any further input, we stand adjourned.

[Whereupon, at 4 p.m., the Committee was adjourned.]

RESPONSE TO POSTHEARING QUESTIONS SUBMITTED BY HON. RICHARD BLUMENTHAL TO HON. DAVID SHULKIN, M.D., U.S. DEPARTMENT OF VETERANS AFFAIRS

Question 1. On June 20, 2016, the Department of Veterans Affairs, Office of Inspector General, issued the report, *Review of VHA's Alleged Manipulation of Appointment Cancellations at VAMC Houston, Texas* (Report No. 15–03073–275). In it, the Inspector General states "VHA's current scheduling software is antiquated and

cumbersome to use and as we have recently reported, it is time for VA to commit to make its replacement or modernization a priority." Dr. Shulkin, in his written testimony for the hearing on June 22, 2016, wrote "VA recognizes the urgent need for improvement in VA's appointment scheduling system." However, two years after the initial wait list and scheduling scandals broke, the VistA Scheduling Enhancement program is still in the pilot phase and being tested in only 10 locations.

a. How does this slow pace of improvement translate into addressing what Dr. Shulkin referred to as an "urgent need?

Response. The VA Scheduling System project is in the implementation phase. VistA Scheduling Enhancements (VSE) has been developed, tested, and deployed for initial use in VA medical centers or clinics at Tucson, Salt Lake City, Asheville, Chillicothe, Cleveland and Hudson Valley. Based on initial user acceptance testing and feedback, VHA is making adjustments to the software and scheduling best practices guidelines before VSE is deployed to additional facilities. In addition to VSE, the Office of Information and Technology (OIT) Mobile team has been working with VHA on the development of the Veteran Appointment Request (VAR). The VAR mobile application allows Veterans, who are enrolled in VA's health care system, to request and view primary care and mental health appointments at VA facilities. The mobile application also allows Veterans to schedule and cancel selected primary care appointments at facilities where they have a Patient Aligned Care Team (PACT). Additionally, another web application, Schedule Manager (SM), will enable VA staff to process the VAR incoming requests for appointments and/or enable Clinical staff to schedule appointments for patients. Veterans surveyed indicated that 91 percent felt that once completed, the VAR would improve Veterans' sense of access to care.

b. When will we see a true modernization or replacement of the scheduling system available in all VA locations?

Response. VHA is implementing scheduling system improvements through the use of VHA's VSE, which provides a graphical, point-and-click interface for schedulers to make appointments. VSE version 1.0 has been developed, tested, and deployed for initial use at six sites. Based on initial user acceptance, adjustments to the software and scheduling processes are being made before VSE is further expanded to other VA facilities. It is important to clarify that VSE is an improvement, but not a full replacement for a VHA scheduling system.

The comprehensive strategy moving forward is the Digital Health Platform (DHP). The DHP will support a better overall experience for Veterans throughout the continuum of care. VA is in the early planning stage for the DHP, and will develop a business case and cost model to shape the strategy. That strategy is includes a commercial-off—the-shelf (COTS) EHR component with comprehensive scheduling capabilities. VA is also in the early stages of assessing business process reengineering and other related planning for moving from VistA to a Commercial off-the-shelf (COTS) Electronic Heath Record (EHR). A decision regarding VA's plans and next steps for the COTS EHR component of the DHP is expected by the end of calendar year 2016.

Question 2. VA delivered a report to the Senate Committee on Veterans' Affairs on December 1, 2014 describing how VA intended to use the funding allocated under the Veterans Access Choice and Accountability Act. In that report, VA outlined its needs for IT development, maintenance, and staffing and estimated it would need $376.6 million to support IT development and infrastructure through October of this year. However, according to data VA provided to my staff of June 6, 2016 VA has spent less than a third of that amount—just under $107 million—through May 2016. Congress allocated these funds so that critical IT investments would be made to expeditiously improve the care of veterans. Please explain why we see such a large discrepancy between what VA estimated it needed for IT and what it has spent to date. Is this an indication that the needs have changed?

Response. VA's needs have not changed. The approximately $270M remaining funds is broken into three funding accounts: Development, Modernization, and Enhancements (DME); Infrastructure Sustainment; and Pay and Administration.

- Within DME, approximately $46M of the $151M originally allocated for fiscal years (FYs) 2015 and 2016 have been obligated, leaving $105M remaining. Of the $105M remaining funds, $71M, or 68 percent, is unobligated for the Medical Appointment Scheduling System (MASS) program, while VA assesses the implementation of VSE, currently in pilot. VA is determining whether VSE will immediately improve scheduling operations without the complexity of integrating a completely new scheduling system into our environment. As VA explores the direction that we will take for a 21st Century Digital Health Platform, an integrated scheduling capability will be included as one of our top priority requirements. The additional $35M unobligated balance is being used to implement mobile applications, expand tele-

health initiatives, and improve Veteran's access to VA care and services. For example, VA recently released the VAR mobile application, which allows Veterans to request and view primary care and mental health appointments at VA facilities. Expansion of this application and the creation of new mobile solutions will help VA meet the Veteran access demands. Additionally, VA has implemented Vets.gov to create a single, on-line access point for Veteran benefits and information.

• Approximately $54M of the $186M for Infrastructure Sustainment has been obligated. The funding provides information technology (IT) equipment for the more than 10,000 new VHA staff. The balance of the funding is used to build-out the IT requirements of new VA facilities. Although the construction and leasing of these facilities has taken longer than expected, the funding needed to procure, install, and maintain the IT equipment necessary to open these new VHA locations is critical to the success of these facilities.

• To date, VA has obligated approximately $10M of the $39M set aside for Pay and Administration. The hiring of new IT staff to support VHA's staffing increase took longer than expected, but we are currently staffed at 93 percent of those positions, with only 13 current vacancies that we expect to have filled by the end of the fiscal year. The remaining $29M unobligated balance will be used to fully fund the 192 positions in FY 2017.

RESPONSE TO POSTHEARING QUESTIONS SUBMITTED BY HON. JERRY MORAN TO HON. DAVID SHULKIN, M.D., U.S. DEPARTMENT OF VETERANS AFFAIRS

Question 3. What new technologies, such as the use of commercial cloud service providers, does VA plan to incorporate into the new EHR platform to ensure that it is future proofed? Who is the IT POC managing the initiative?

Response. For the Digital Health Platform for Next Generation of Care, VA will adopt a cloud-first approach that looks at commercial offerings that are architected to operate on a cloud infrastructure. Pending final decision, the core of this platform would be a COTS Electronic Health Record (EHR) system. COTS EHR vendors would be key partners to assist VHA with their needs by optimizing available solutions that operate in a cloud infrastructure. The core principles for creating and operating the platform include:

• Adopting a Software-as-a-Service (SaaS) platform paradigm for "future proofing" VHA's technologies. The essential elements of a SaaS product model would incorporate the following concepts:

– *One Logical Data base system:* The EHR system needs to have an underlying database that has one data model. This means:

  • VHA will always be on one version of the data
  • VHA is using the same, up-to-date nomenclature for clinical terms
  • There is no requirement of synchronization of the data. This is unlike the current scenario with over 130 instances of VistA at the application level (i.e., a transaction made in the system is available immediately VHA-wide and enabled by the internal architecture). An update (i.e., Medication updates from RxNorm database), will instantly be available to everyone.

– *One Application Codebase:* To ensure that all VHA providers have access to the same software capability and are able to use common and consistent processes, the application will be on only one live version of running code. Upgrades to the code will be simultaneously accessible to all providers. The architecture would allow for scale-out of the application tier to provide a high performance user experience.

– *One Set of Workflows:* In order to have consistent business processes, VHA-specific workflows would be established to allow for best practices to be disseminated across VHA consistently. Setup of one set of workflows in one logical instance will ensure that policy compliance is simplified.

– *One Gateway for Data:* Given the critical need of data exchange between multiple care settings, within and outside VHA, there will be a single, authoritative gateway for the exchange of data between the EHR and non-VA systems. The data exchange will need to support semantic interoperability.

• Leveraging the innovation of multiple partners by replacing legacy and homegrown systems with best-fit, class-leading COTS solutions for all key components to create and sustain the platform. For all the foundational components, we will look first at the commercial products that have the best cloud-based architecture within their solution, (i.e., solutions that are either already on the cloud or have a robust architecture and roadmap that will allow VA to deploy the solution using commercial and government cloud providers).

• Retaining the flexibility to use VA's negotiating position and encouraging competition among cloud infrastructure vendors who provide similar capabilities to manage Total Cost of Operations.
• Enabling interoperability and rapid innovation through Application Programming Interfaces (APIs) to create value from shared resources and promote an entrepreneurial ecosystem. Working with multiple partners on standards for APIs. The ONE API framework will allow VA to use new and innovative solutions, directly from the cloud, without having to install or develop such solutions in-house. These principles will provide the capability of swapping in or out solutions with a great deal of flexibility that will allow VA to future-proof its platform by adapting to change in the commercial technology environment. VA is currently working on a Public-Private partnership with the Interoperability Integration Innovation Lab of Georgia Institute of Technology where a rapid proof of concept will be developed to validate several of the Digital Health Platform concepts, through working demonstration of clinical scenarios that are applicable to our Veteran population.

RESPONSE TO POSTHEARING QUESTIONS SUBMITTED BY HON. JOHN BOOZMAN TO HON. DAVID SHULKIN, M.D., U.S. DEPARTMENT OF VETERANS AFFAIRS

Question 4. In February 2016, we met in my office and discussed third-party collections and possible IT solutions for non-VA care. VA-OIG specifically has reported that as of 2011 over $110M annually was left uncollected from third party payments. With the rise of non-VA care those dollars left uncollected have most likely increased. Language in the FY 2016 Omnibus Appropriations conference report instructed the Department of Veterans Affairs to "conduct a pilot similar to the one described in the Senate report."

Specifically, the report language "instructs VA to initiate within 90 days after the enactment of the act a pilot program in one Veteran Integrated Service Network [VISN] that shall last 18 months. The Department shall choose through a fair and open competition a non-government entity with substantial private sector revenue cycle management experience to conduct the pilot." The purpose of seeking best of breed with commercial experience is to provide best value to VA by leveraging the best the private sector has to offer.

As we discussed in our February meeting, the language is specific that the entity conducting the Pilot be a "non-government entity." This language was written so that VA could not send this pilot to a federally funded research development center (FFRDC). This pilot is designed to improve and reengineer the processes at the front end, middle, and backend at the CPACs so that these dollars collected are maximized and can be put back into VA health care system.

Please provide me with an update on the status of this important pilot as well as if there has been any publication of a procurement or RFP for the pilot utilizing full and open competition.

Response. In May 2016, VA submitted its report to Congress on Veterans Access, Choice, and Accountability Act (Act): Third Party Fee Collections, as requested in the Senate Appropriations Report, page 53, Public Law 114–57. The Senate Appropriations Committee's recommendation to contract with a private-sector entity that supports the initiation of a pilot within 90 days after enactment of the Act is not feasible. VA could begin developing an acquisition package within 90 days of enactment of the Act, but it is not feasible to secure a contract and establish a pilot within the required timeframe. On average, it takes six months to develop an acquisition package and award the contract.

VHA currently works with several non-governmental entities with substantial private sector revenue cycle management experience. In addition, VHA works with Third-party vendors experienced in VA and commercial revenue cycle management. These vendors provide expertise on several activities, including:

• Developing standard operating policies
• Performance monitoring
• Developing annual collections forecasts for VA and Care in the Community collections.

These vendors have supported VHA's Non-VA Revenue Team and ongoing efforts to monitor performance and project collections at individual VA medical centers and across the Nation. VHA also utilizes industry expertise to develop and distribute the annual collection targets for VA and Non-VA Care collections and reviews the potential impact of the Veterans Choice Act on Medical Care Collections Fund collections. Additionally, VA has taken several steps to address the initiatives requested through the pilot program. This collaboration continues today.

VA has taken important steps to implement a business case that is focused on process standardization, staff education and training, and consistent system applications to increase reimbursement to VA from Non-VA fee care. VHA has implemented process improvements that have positively impacted Non-VA Medical Care/ Revenue results, including:

1. Reengineered standardized business processes, policies, and procedures
2. Developed the standardized reports for first and Third-Party revenue billing and Third-Party revenue precertification
3. Developed Non-VA Care/Revenue metrics and monitoring process
4. Developed and delivered standardized training to revenue staff
5. Developed Internal Controls for testing, which started in FY 2014

