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HEARING ON THE CURRENT STATE OF AFFAIRS FOR INFORMATION TECHNOLOGY WITH VA

HEARING

BEFORE THE

COMMITTEE ON VETERANS' AFFAIRS
UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

SEPTEMBER 19, 2007

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HEARING ON THE CURRENT STATE OF AFFAIRS FOR INFORMATION TECHNOLOGY WITH VA

WEDNESDAY, SEPTEMBER 19, 2007

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

The Committee met, pursuant to notice, at 9:29 a.m., in room 562, Dirksen Senate Office Building, Hon. Daniel K. Akaka, Chairman of the Committee, presiding.

Present: Senators Akaka, Murray, and Burr.

OPENING STATEMENT OF HON. DANIEL K. AKAKA, CHAIRMAN, U.S. SENATOR FROM HAWAII

Chairman AKAKA. Aloha and welcome to all of you today to this hearing on the state of information technology within the Department of Veterans Affairs.

Before we get started, I take this opportunity to welcome the Senators of this Committee. I look forward to working closely with them and look forward to that, as well. You all know that we have a long history of bipartisan work on this Committee, and I am sure that this will continue.

Over the past several years, this Committee has held multiple oversight hearings on VA IT issues. Often, these hearings have been in reaction to public failures of IT, including last year's data theft. This year, as we talk about seamless transition, we also think about IT and how we can do that, as well.

Lost in the outcry about these failures was the recognition that while IT can help VA in many ways, it is only a tool, not an overall solution to a problem or a need. Without competent management, sound business practices, trained users, and a clear idea of desired outcomes, IT not only fails to be an asset, it can even become part of the problem.

A recent VA IG audit that I requested on waiting times at VA facilities is a good example of how IT can and cannot be used. The investigation looked into the disconnect between what VA managers tell us about waiting times for VA appointments—that there are virtually none—and what veterans and stakeholders tell us about the existence of long lines. What the IG found was problems with the accuracy and completeness of the waiting lists, lists that are generated from VA's electronic health care records system. VA responded to the IG's findings in part by suggesting that new computer software will solve the problem. This is not an exclusive an-

swer. Unless and until Congress and VA leadership can rely on VA's data as it is entered into databases, we cannot work together to get an accurate picture of the state of VA care and provide appropriate resources. IT can help, but only when there is a clear agreement on how to collect and report information.

Today's hearing will focus on a wide range of information technology issues. Last year, there was a major change in the management of IT affairs at VA and this hearing is a chance to get a reading on the impact of that change. We hope to get a sense of where the Department is and where it is going with IT. We will hear testimony on the effects of changes to VA's IT management structure on the Department's ability to deliver health care benefits and services to veterans. Other issues before us include the impact of new VA IT security policies and procedures since the 2006 data theft, the prognosis for the development of a DOD–VA bi-directional interoperable Electronic Health Record, and other significant IT issues.

Also, we are today releasing a GAO report on information security that I, along with other Members of the Senate and House, requested in response to last year's data theft. The report finds that although VA has made progress, there is still much work to do and part of that work is to hear from you and discuss this report today.

Secretary Howard, at your confirmation hearing last year, I challenged you to restore the confidence of veterans in VA's ability to protect their personal information while leveraging IT solutions to maintain VA's preeminence as a health care and benefits provider. So I look forward to your assessment of where we are today and where we need to go in these areas. Millions of veterans rely upon VA for benefits and services, and in so doing have to rely on VA's IT systems. We must do all we can to ensure that they can do so with confidence.

I want to thank all of our witnesses today for being here and sharing with us what they have done thus far.

Before we start, I want to take this opportunity to welcome Senator Richard Burr of North Carolina to his new role as the Committee's Ranking Republican Member. I look forward to working closely with him as we continue to seek ways to meet the many challenges that continue to confront veterans and VA. As I said, we do have a history of bipartisanship here on this Committee and I am sure that will continue with Senator Burr, without question. We must do all we can to ensure that we can do that with confidence. I am glad to have the Senator from Washington here, as well. So let me call on Senator Burr for his statement.

STATEMENT OF HON. RICHARD BURR, RANKING MEMBER, U.S. SENATOR FROM NORTH CAROLINA

Senator BURR. Mr. Chairman, let me thank you for your gracious welcome. As you and I both know, we serve as Chair and Ranking Member on other Subcommittees and we find ways to address the business that we need to continue friendship and stay focused on the issues that are important to that Committee. I look forward to continuing that as we address the issues before us in the Veterans Affairs Committee. I thank you for calling this hearing. More importantly, I thank all of our witnesses today. I take the Ranking

Membership on a temporary basis until other things are sorted out, but I certainly look forward to the information that we are here to talk about.

The topic of information technology covers a wide variety of different areas, all of which are important and all of which have the ability to positively or negatively impact a veteran's quality of life. From electronic health and benefit records, to the electronic infrastructure that enhances VA services, to protecting our veterans' personal information, IT is the driving factor in accomplishing all these things.

The May 3, 2006 theft of computer external hard drive from a VA employee's home resulted in the compromise of over 26 million veterans' personal information. It drew national attention to the VA and highlighted problems with its information technology policies, procedures, and structures. The theft initiated a strong reaction from Congress, as it should have, and last December, we passed the VA Information Security Enhancement Act of 2006. Among many of the mandated improvements to the VA IT system, we assigned responsibilities to hold specific individuals accountable. We have created prompt Congressional reporting requirements, and we provided for recruitment and retention of individuals skilled in information technology.

The theft also expedited a complete restructuring of the VA's IT organization so that the VA headquarters could have more IT oversight over all of its facilities throughout the United States. It then served as a catalyst for complete review of security systems and procedures and raised Congressional interest in and scrutiny of the IT program.

The result of all of this is that the VA has undertaken a massive effort to restructure their IT program. VA's efforts to create consistency and enhanced security within a formerly decentralized IT program has resulted in a new and centralized IT architecture. Individual hospital directors used to have control over their own IT staff and programs. This resulted in inconsistent technologies within VA and little or no oversight from the VA main office. This new restructuring of VA IT is meant to consolidate efforts in the areas of policy, planning, purchasing, and training.

However, no decision comes without consequences and I have some concerns as to whether this centralization will result in an IT system that is too slow and doesn't respond to local needs. That being said, I look forward to learning more about the current state of these efforts, the successes and the challenges that have yet to be addressed. I also hope to hear more about VA's progress with DOD–VA efforts to create an interoperable, interchangeable health records system. I hope to learn more about where we stand in the area of VA–DOD data sharing and standardization, what we have accomplished and what we have left to do. Someone who served this country should not have to compromise their health just because VA and DOD can't get health information from each other.

With all this in mind, we convene today to learn about the current status of the newly centralized IT management system, current improvements in IT security, and the state of IT infrastructure and the progress made in VA and DOD information sharing.

I would like to personally thank the Chair for his indulgence as we have transitioned on this side and to once again thank all of our witnesses today for their very candid testimony. I thank the Chair.

Chairman AKAKA. Thank you very much, Senator Murray. This Committee is in order as I call on our Hon. Senator Patty Washington from Washington for her statement.

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

Senator MURRAY. Thank you very much, Chairman Akaka. I join you in welcoming Senator Burr to the position of Ranking and look forward to working with you on many issues. I know we have talked about what we share in common, as well, for our veterans.

Mr. Chairman, the topic of today's hearing, which is the state of information technology within the VA, is incredibly important. It impacts nearly everything the VA does, from delivery of health care and benefits, to the protection of sensitive personal information, to the pursuit of a truly seamless transition with DOD. The VA's IT system is really kind of the glue that holds everything together.

The VA has a lot to be proud of when it comes to its IT system. Its Electronic Health Records have improved the quality of health care for veterans while at the same time reducing the cost of delivering health care. And as we all know, when Hurricane Katrina hit New Orleans, veterans who were enrolled in the VA system, unlike many others, did not lose their medical records because the VA's back-up files preserved their records and enabled them to get care across the country at different VA facilities.

Despite all this, the VA's IT system does have some very serious challenges. Chairman Akaka, I know that you and many other Members of this Committee share my deep concern over the VA's information security and inventory control practices. Since the VA's now well publicized loss of personal data in May of 2006 and January of 2007, the VA has taken steps to improve its information security practices, but as the GAO recently pointed out, more does remain to be done.

Mr. Howard, I hope to hear from you today about why the VA has not fully implemented most of the key GAO and IG recommendations to strengthen your agency's information security practices. According to a July 2007 GAO report, four audited VA facilities reported more than 2,400 missing items estimated to cost $6.4 million. A 2004 GAO report of VA's inventory control revealed that fewer than half of the items selected for testing could be located, and most of that was IT equipment. These deeply troubling revelations raise some serious questions about who is minding the shop at the VA. Our veterans need to know that their personal and sensitive data is well protected and they deserve to know what is being done to improve the accountability and control of the VA's IT inventory.

As we will surely hear from Mr. Howard, one of the key ways the VA has acted to minimize the risk of data loss has been to centralize the VA's information technology system. This effort certainly has its merits, but some have raised questions about how

this change will impact the ingenuity and flexibility that local providers have on the development of the system.

So I look forward to hearing from our witnesses today on how they think the VA can balance the needs for centralized management of the IT system while still meeting our local needs out in our communities. I also look forward to hearing from our witnesses about where things stand in the development of a joint VA–DOD Electronic Health Care Record. For too long, as we all know, our servicemembers and veterans have suffered the consequences of this system failure and we need to make sure, Mr. Chairman, that we are doing everything in our power to right that wrong.

So I really appreciate the opportunity to be at this hearing today and look forward to the testimony from the witnesses.

Chairman AKAKA. Thank you very much for that, Senator Burr.

I am pleased this morning to introduce our first panel. Assistant Secretary for Information and Technology Bob Howard has served in his current position since the fall of the year 2006. He has the daunting task of reorganizing VA's IT and its management structure while continuing to provide uninterrupted support for the delivery of health care and benefits.

Secretary Howard is accompanied by Dr. Paul Tibbits, Deputy Chief Information Officer in the Office of Enterprise Development, and Ray Sullivan, Director of Field Operations.

Secretary Howard, I want to thank you for coming today. We look forward to your assessment of where VA IT is and where it needs to go, and I know we are looking forward to your kind of leadership and would like to hear from you at this time. Will you please proceed with your testimony.

STATEMENT OF ROBERT T. HOWARD, ASSISTANT SECRETARY FOR INFORMATION AND TECHNOLOGY, U.S. DEPARTMENT OF VETERANS AFFAIRS; ACCOMPANIED BY PAUL A. TIBBITS, M.D., DEPUTY CHIEF INFORMATION OFFICER, OFFICE OF ENTERPRISE DEVELOPMENT, OFFICE OF INFORMATION AND TECHNOLOGY, U.S. DEPARTMENT OF VETERANS AFFAIRS; AND RAY H. SULLIVAN, DIRECTOR OF FIELD OPERATIONS, OFFICE OF INFORMATION AND TECHNOLOGY, U.S. DEPARTMENT OF VETERANS AFFAIRS

Mr. HOWARD. Thank you, Mr. Chairman. I would like to thank you for the opportunity to testify on the current status of the VA OIT reorganization and its impact on the delivery of health care and benefits, the effect of enhanced VA IT security policies and procedures on health care and benefits delivery, the status of asset management for IT systems, the legacy system transition, the Joint Inpatient Records System and unresolved problems identified during the realignment. These are all very important issues that need to be addressed.

As you mentioned, sir, I am accompanied by Dr. Paul Tibbits and Ray Sullivan. Paul will discuss issues associated with development and Ray on the operations side.

First, sir, though, I would like to thank you for actually being the catalyst for establishing my top priorities as Assistant Secretary for the Office of Information and Technology. These were developed in response to a nomination post-hearing question presented by you

back in September of last year. At the time of your question, the paper was blank, so I thank you for prompting me to develop what has turned out to be very helpful, extremely helpful, priority statements. These priorities are guiding the realignment process we see taking place today. There are seven of them.

Briefly, they include, (1) establishing a well-led, high-performing organization that delivers responsive support.

(2) standardizing IT infrastructure and IT business processes throughout the VA.

(3) establish programs that make VA's IT system more interoperable and compatible.

(4) effectively managing the IT appropriation to ensure sustainment and modernization of our IT infrastructure and more focused application development to meet increasing and changing requirements of our business units.

(5) priority is strengthening information security controls within VA and among our contractors in order to substantially reduce the risk of unauthorized exposure of veteran or VA employee sensitive personal information.

(6) priority is creating an environment of vigilance and awareness to the risk of compromising veteran or employee sensitive personal information by integrating security awareness into daily activities.

And lastly, sir, the last priority is to remedy the Department's longstanding IT material weaknesses relating to a general lack of security controls, and sir, I assure you that we are working hard to give these priorities the required attention.

As you know, the Secretary approved the Department's new reorganization structure in 2007 and we set a goal to complete the realignment by July of 2008. We have transferred over 6,000 employees to the Office of Information and Technology, and this, along with the centralized IT appropriation and delegation of authority for FISMA, provides a very unique opportunity to significantly improve IT activities within VA.

Another critical element in that regard is the full commitment for VA's leadership to make this reorganization successful, and we do have that commitment.

I have provided an organization chart for you, a reference throughout the hearing, and as you see there, there are five additional deputies that we have. We also have an IT oversight and compliance capability and a Quality and Performance Office. We have also implemented a new IT governance plan which establishes the processes, responsibilities, and authorities required to manage IT's resources.

Clearly an important question associated with this realignment is how has it impacted the delivery of health care and benefits to our veterans. In my opinion, there has been no significant change in these two areas, which was, in fact, a key objective of this reorganization, and that was to do no harm. This is not to say we have not had problems. We have. But we have also experienced improvements in our ability to gain knowledge over IT activities that were not very visible in the past. We have gained benefits in IT funding details across the VA and also in our ability to protect the sensitive information of our veterans.

An area in which information protection has dramatically improved is incident response. VA has encrypted over 18,000 laptop computers and has implemented procedures for issuing encrypted portable data storage devices. This month, the Department is procuring software to address the encryption of data at rest. And just last week, we awarded an extremely important contract, and that is for an extensive port monitoring capability which will help us better control what devices can access our network.

At the same time, VA continues to increase self-reporting security and policy and privacy violations and incidents. This trend is a direct positive outcome of the significant amount of policy guidance and training conducted on information protection over the past year and a half. Since the May 2006 data breach, the VA staff is now more aware of the importance of protecting our veterans' and employees' information and identities. While we do have a way to go here, I have definitely seen an improvement.

Regarding the annual FISMA report that we will submit this year, not only will we submit one—and as you know, we didn't submit one last year, we got an incomplete—for the first time, we have completed testing of over 10,000 security controls on our 603 computer systems. This is the first time that has been done. We are also addressing some critical problem areas.

As you know, the House Veterans Affairs Oversight and Investigations Committee recently held a hearing on VA's IT asset management based on a GAO report which found inadequate controls and risks associated with theft, loss, and misappropriation of IT equipment at selected VA locations. For the past 6 months, tightening IT inventory control throughout the VA has been the focus of a cross-functional tiger team. Types of equipment to be inventoried are Blackberries, thumb drives, cell phones, and in addition, VA has issued a memorandum requiring each VA facility to complete it by the end of December of this year, a wall-to-wall inventory of all IT equipment assets, including sensitive items, regardless of cost. This initial inventory will help provide a VA IT asset baseline, something that has not existed before.

We have also made progress in the evolution of our health care and benefits systems and in improving ties with DOD. The work with DOD has been most helpful in the area of data sharing and data standardization. We are moving our health care system from a hospital-centric model to a patient-centric approach. This approach will ultimately allow veterans and their care providers to access seamless health records and information at any time regardless of location. This modernization will utilize a central IT architecture and a six-phase transition plan to be completed by 2015.

The existing portfolio of VBA applications are based on various legacy technologies, most of which are not web-based. These legacy applications are more expensive in that they require more intensive support since they rely on outdated software. To remedy this, VBA has established an application architecture blueprint to be used for all applications and a pilot is being performed for the Benefits Delivery Network Rehost Program to migrate the legacy system to a more modern browser-based environment.

In closing, Mr. Chairman, I want to assure you, that we will remain focused in our efforts to improve all aspects of the informa-

tion technology environment in the VA and to make sure that we do not negatively impact the delivery of health care or benefits in the process, but instead begin to see steady improvements in modernizing both our health care and benefits IT environments.

Thank you for your time and the opportunity to speak on this issue and we would be happy to answer any questions you may have.

[The prepared statement of Mr. Howard follows:]

PREPARED STATEMENT OF ROBERT T. HOWARD, ASSISTANT SECRETARY FOR INFORMATION AND TECHNOLOGY, DEPARTMENT OF VETERANS AFFAIRS

Thank you, Mr. Chairman. I would like to thank you for the opportunity to testify on the current status of the VA Office of Information & Technology's (OIT) reorganization and it's impact on the delivery of healthcare and benefits; the effect of enhanced VA IT security policies and procedures on healthcare and benefits delivery; the status of asset management/inventory control for IT systems; the legacy system transition; joint in-patient record systems; and unresolved problems identified during the realignment. These are all very important issues that need to be addressed. To assist in discussing these issues today, I am accompanied by:

- Dr. Paul Tibbits, my Deputy Chief Information Officer for Enterprise Development,
- Mr. Ray Sullivan, my Director of Field Operations

First, I would like to thank you Mr. Chairman for being the catalyst for establishing my top priorities as Assistant Secretary for the Office of Information and Technology. They were developed in response to a nomination post-hearing question presented by you back in September of last year. Thank you for prompting me to develop what has turned out to be very helpful and extremely important priority statements.

These priorities are guiding the realignment process we see taking place today. There are seven of them. Briefly, they include (1) establishing a well-led, high†performing, IT organization that delivers responsive IT support to the three Administrations and Central Office staff sections; (2) standardizing IT infrastructure and IT business processes throughout VA; (3) establishing programs that make VA's IT system more interoperable and compatible; (4) effectively managing the VA IT appropriation to ensure sustainment and modernization of our IT infrastructure and more focused application development to meet increasing and changing requirements of our business units; (5) strengthening information security controls within VA and among our contractors in order to substantially reduce the risk of unauthorized exposure of veteran or VA employee sensitive personal information; (6) creating an environment of vigilance and awareness to the risks of compromising veteran or employee sensitive personal information within the VA by integrating security awareness into daily activities; and (7) remedying the Department's longstanding IT material weaknesses relating to a general lack of security controls. I assure you that we are working hard to give these priorities the required attention.

As you know, the Secretary approved the Department's new organization structure in 2007, and we've set a goal to complete the realignment by July 2008. We have transferred over 6,000 employees to the Office of Information and Technology. This, along with the centralized IT appropriation and delegation of authority for FISMA provides a unique opportunity to significantly improve IT activities within VA. Another critical element in that regard is the full commitment from VA's leadership to make this reorganization successful.

I have provided an organization chart for your reference throughout the hearing. In addition to five additional deputies, we have an IT Oversight and Compliance capability and a Quality and Performance Office. We also have implemented a new IT governance plan which establishes the processes, responsibilities and authorities required to manage VA's IT resources. The GAO recently released a report on our realignment progress and correctly identified that there is more work to be done to have a successful transition from a decentralized to a centralized organization. We have already begun implementing some of their recommendations.

Clearly an important question associated with this realignment is how has it impacted the delivery of healthcare and benefits to our veterans? In my opinion, there has been no significant change in these two areas—which was a key objective of this reorganization—to do no harm. This is not to say we have not had problems—we have. But we have also experienced improvements in our ability to gain knowledge

over IT activities that were not very visible in the past, in IT funding details across the VA, and in our ability to protect the sensitive information of our veterans.

An area in which information protection has dramatically improved is incident response. VA has encrypted over 18,000 laptop computers, and has implemented procedures for issuing encrypted portable data storage devices. This month, the Department is procuring software to address the encryption of data at rest. And just last week we awarded a contract for an extensive port monitoring capability which will help us better control what devices can access our network. At the same time, VA continues to increase self-reporting security and privacy violations and incidents. This trend is a direct, positive outcome of the significant amount of policy, guidance, and training conducted on information protection over the past year and a half.

Since the May 2006 data breach, the VA staff is now more aware of the importance of protecting our veterans' and employees' information and identities. While we do have a way to go here, I have definitely seen improvement. The Department has also undertaken a concerted effort to reduce the use of social security numbers and to review and eliminate a significant amount of personally identifiable information VA currently holds. To that end, VA has drafted two documents outlining plans to achieve both these goals. These plans were developed in accordance with OMB Memorandum M–07–16, "Safeguarding Against and Responding to the Breach of Personally Identifiable Information" and it will be included in this year's FISMA report. Regarding the FISMA report, not only will we submit one this year, (we got an incomplete last year), but we have, for the first time, completed testing of over 10,000 security controls on our 603 computer systems.

We are also addressing some critical problem areas. As you know, the House Veterans Affairs Oversight & Investigations Committee recently held a hearing on VA's IT asset management based on a GAO report (report 07–505) which found inadequate controls and risk associated with theft, loss, and misappropriation of IT equipment at selected VA locations. In that report, GAO found many problems regarding the IT asset management environment and included a number of important recommendations—with which we agree and are implementing. We have completed a handbook on the Control of Information Technology Equipment within the VA which includes each of the recommendations made by GAO in its report. These documents are now being finalized within the Department, but we have already implemented the procedures they describe. They will provide clear direction on all aspects of IT asset management.

For the past 6 months, tightening IT inventory control throughout VA has been the focus of a cross-functional Tiger Team. Types of equipment to be inventoried are black berries, thumb drives, cell phones, etc. In addition, VA has issued a memorandum requiring each VA facility to complete, by the end of December of this year, a wall-to-wall inventory of all IT equipment assets, including sensitive items, regardless of cost. Reporting requirements have been established at the Facility, Regional and Field Operations levels to ensure that issues are identified and addressed early in the process. By way of support, we have established an IT Inventory Control Knowledge Center that is accessible by all VA personnel. This website provides references, templates, definitions, frequently asked questions and a link to contact the Tiger Team directly. Also, the Office of Oversight and Compliance is working with Tiger Team members to develop a compliance checklist that will be used for scheduled and unscheduled audits regarding IT assets. This initial inventory will help provide a VA IT asset baseline—something that has not existed before.

We have also made progress in the evolution of our healthcare and benefits systems and in improving ties with DOD. The work with DOD has been most helpful in the area of data sharing and data standardization. We are moving our healthcare system from a hospital-centric model to a patient-centric approach. This approach will ultimately allow veterans and their care providers to access seamless health records and information at any time, regardless of location. This modernization will utilize a central IT architecture and a six-phase transition plan to be completed by 2015.

The existing portfolio of VBA applications are based on various legacy technologies, most of which are not web-based. These legacy applications are more expensive in that they require more intensive support since they rely on outdated software. To remedy this, VBA has established an application architecture blueprint to be used for all applications. A pilot is being performed for the Benefits Delivery Network (BDN) Re-host program to migrate the legacy system to a more modern browser-based environment.

In closing, Mr. Chairman, I want to assure you that we will remain focused in our efforts to improve all aspects of the Information Technology environment in the VA and to make sure that we do not negatively impact the delivery of healthcare or benefits in the process but instead begin to see steady improvements in modern-

izing both our healthcare and benefits IT environments. Thank you for your time and the opportunity to speak on this issue. We would be happy to answer any questions you may have.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. AKAKA TO ROBERT T. HOWARD, ASSISTANT SECRETARY FOR VETERANS AFFAIRS

Question 1. During an oversight visit to the Honolulu Regional Office, Committee staff learned that claims are being delayed because VBA staff are not able to read medical reports which are scanned into VHA's electronic health record system. I understand that happen almost a year ago. VBA asked for access to the electronic health record files because of the delays in processing claims and this request has not been approved. It is my further understanding that VBA will not he able to view these records until some time in 2008; in the meantime, processing of claims is delayed until the records can be printed out and sent to VBA. Given the current backlog in claims processing, this seems like an IT solution that should be given a priority. What can be done to improve the electronic transmission of medical information from VHA to VBA in a more timely manner?

Response. The compensation and pension records interchange application (CAPRI), provides the Veterans Benefits Administration (VBA) employees with online access to electronic medical records, stored at Veterans Health Administration (VHA) facilities. This application allows VBA employees to access and print medical evidence needed for claims processing. It also allows text from electronic documents to be copied and pasted into rating decisions, to eliminate the need for re-keying this important information, cited as evidence, in support of a veterans' disability claim.

One additional element that has been requested is access to the imaged files, stored in the VHA systems in VistA Imaging. The plan has always been to expand CAPRI, to provide access to these imaged records. We are assessing current priorities to determine when it will be feasible to incorporate this type of information into the CAPRI interface. Once the enhancement is completed, this additional type of medical evidence can be obtained and stored in Virtual VA, the VBA imaging system.

Question 2. As mentioned in my opening statement, my requested investigation on VHA's waiting times yielded findings about the accuracy and completeness of the waiting lists. Senator Tester has also brought to my attention the need to refine the pharmacy ordering system, so that prescriptions aren't mailed out to veterans until they are needed. Is responsibility for matters such as fixing the electronic waiting list and refining pharmacy systems your responsibility or does that still vest in VHA? What priority does VA place on finding specific health information solutions?

Response. The responsibility for addressing the electronic waiting list and refining pharmacy systems is jointly shared by VHA and VA's Office of Information and Technology (OIT). VHA is responsible for defining software requirements. OIT is responsible for the development of software which meets those requirements.

VHA has conveyed to OIT that the two software packages (pharmacy and scheduling) are both top priorities for VHA and that development efforts should be managed to address those priorities. Therefore, here are the current OIT milestones for the pharmacy re-engineering and replacement scheduling application projects:

Pharmacy Re-engineering Event (PRE)	Planned Start	Planned Finish
System Development Approval	1/1/04	9/30/05
Proof of Concept Development	3/1/2006	12/31/2006
PRE v0.5	4/1/2007	8/31/08
PRE v1.0	4/1/2007	2/28/10
PRE v2.0	10/1/2008	9/30/2010
PRE v3.0	10/1/2009	9/30/2011

Replacement Scheduling Application	Planned Start	Planned Finish
Develop Enterprise-Wide		
Workflow Processes	5/2001	5/2002
Architecture and Detailed		
System Design	5/2002	3/2004
Implementation of Executable Code	10/2004	3/2004
Product Integration	8/2003	6/2008
Alpha Testing	6/2008	12/2008
Beta Testing	12/2008	9/2009q
National Release	10/2009	1/2011

Question 3. It seems as though VA has been in the process of modernizing its health and benefits IT systems for years. What is the time line for completing the migration of VistA and BDN to modern IT platforms?

Response. A completion date for the migration of VistA to a modern IT platform, also referred to as the HealtheVet modernization effort, is currently in the proposal phase and is being reviewed. A six-phase transition plan is proposed to deploy all applications within the new VistA-HealtheVet environment, which will use a central IT architecture, by 2015. Phase I focuses on the deployment of core infrastructure components such as the health data repository, administrative data repository, and several common services; as well as, the first major applications built upon this services oriented architecture (SOA). Major applications under development as part of Phase II include the laboratory and pharmacy replacement systems. Upon completion of all six phases, VA will have an IT health care system that holds a comprehensive, interdisciplinary medical record, which will be available anywhere. The estimated cost for the proposed plan does not include operations and maintenance costs.

The current schedule to migrate BDN business functionality off the Honeywell/Bull mainframe projects completion in September 2012. Upon successful completion, the Honeywell/Bull Mainframe will be retired from the VA IT environment. BDN is composed of several applications that support three VBA business lines: compensation and pension (C&P), education, and vocational rehabilitation and employment (VR&E). C&P functionality within BDN is scheduled to be fully replaced by VETSNET in the third quarter of fiscal 2009. VR&E functionality is contained in the Chapter 31 application, which is scheduled for conversion to the VA "To Be" architecture in Fiscal Year 2011. The remaining BDN functionality supports education service and is scheduled to be fully migrated to the VA "To Be" architecture by third quarter 2012. Subsequent to validation efforts to ensure all functionality has been successfully transitioned, the Honeywell/Bull mainframe will be shutdown and removed from the VA IT environment in September 2012.

Question 4. This question pertains to the issue of VA and DOD interoperability. I understand that VA has an integrated medical information system, while DOD has multiple systems that are not integrated. What are the challenges for VA health professionals to receive accurate and timely medical information from DOD when it does not have an integrated system that cannot fully communicate within DOD, much less with VA and when not all of DOD's medical information is available electronically?

Response. VA and the Department of Defense (DOD) are working together to address challenges related to VA obtaining access to the multiple systems in which DOD data is held. Despite these challenges, VA and DOD are now sharing unprecedented amounts of electronic medical data. Over the past several years, VA and DOD have worked closely and collaboratively to develop incremental data exchanges, which now support the one way and bi-directional exchange of most health data that are available in electronic format.

For example, VA and DOD worked to first develop the bi-directional health information exchange (BHIE), to support the exchange of text data from legacy composite health care system (CHCS). VA and DOD later collaborated on additional work that permitted the exchange of data via the inpatient essential clinical information system (CIS), and later with the clinical data repository of AHLTA, DOD's electronic health information system.

Despite the lack of uniform implementation across DOD and the resulting increased time it took to make DOD data available, VA providers are now able to use BHIE to view electronic laboratory results, allergy, pharmacy, radiology results, theater data, and select inpatient data available electronically from major DOD facili-

ties, such as discharge summaries and emergency department notes. We also have demonstrated the successful bi-directional exchange of digital radiology images at a pilot site in El Paso, Texas. Additional work will support the future exchange of encounter notes, problem lists, vital signs, history data and questionnaires.

VA's ongoing ability to share data with DOD, in a seamless fashion, is dependent upon VA's ability to develop modern tools and technologies and DOD's ongoing efforts to develop a complete electronic health record. VA is working with DOD to document a study to explore developing a joint in-patient electronic health record. This will have the potential to address the unavailability of electronic data for much of the DOD inpatient record.

Question 5. The House Appropriations Committee report language accompanying the 2008 VA MILCON Appropriations Bill would cutoff funds for VA's continued development of its electronic health record system, unless it is interoperable with DOD. What would be the impact on future development of VA's electronic health record system should funding be cutoff?

Response. As the electronic health record is at the center of VA's health care system, possible impacts on future development of VA's electronic health record system should funding be eliminated include:

- Inability to comply with regulatory changes that would require software modifications for implementation and reporting.
- Compromise in patient safety due to elimination of funding to correct software deficiencies.
- Inability to enhance the current interoperable features within VistA (e.g. remote data interoperability, laboratory data sharing, Vista imaging sharing pilot).
- Inability to enhance the bi-directional health information exchange (BHIE), another aspect of VA/DOD interoperability.
- Compromised ability to effectively report on and monitor pandemic disease outbreaks.
- Inability to meet Global War on Terror (GWOT) and/or Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) mandates.

VA would fall from industry leading position as the private sector continues to improve in this arena, reducing public opinion of VA activities.

Question 6. During questioning, Mr. Lucas testified that he was denied authority by VACO to purchase certain IT equipment that he considered would be helpful, to improve the efficiency and operations of his hospital. Dr. Glaser followed-up, by testifying that within his health care network, 50 percent of a hospital's IT spending was discretionary, so long as it was spent within established guidelines. He also mentioned a program for awarding grants for IT innovation. Please comment on the policy that precludes a VA Medical Center Director from using discretionary funds to purchase IT equipment that they deem would improve the efficiency and operations of their facility. Also, please comment on whether or not VA has an existing IT innovation grant program and if not, if one is in the planning stages.

Response. As stated in the attached memorandum dated April 13, 2006, all IT expenditures are directed and controlled under a separate appropriation and under the authority of the VA Chief Information Officer (CIO). The VA CIO allocates discretionary funds to each medical center as mentioned above. There is currently no program for awarding grants for IT innovation.

Question 7. I understand that VA's Office of Information and Technology (OI&T) has metrics that measure how well VA Administrations are complying with VACO centralized management IT policies and procedures. Does a metric exist that measures how well OI&T is supporting VHA and VBA?

Response. There are no metrics that measure either "side" of this concept, i.e., either how well VA's Administrations are complying with VACO centralized management IT policies, or conversely, how well OIT is supporting the Administrations.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BERNARD SANDERS TO ROBERT T. HOWARD, ASSISTANT SECRETARY FOR VETERANS' AFFAIRS

Question 1. For years now, we have seen report after report about the unconscionable delays, appeals, and remands that characterize the VBA disability compensation process. I have thought for some time now that automating the rules embodied in the Veterans Administration Schedule for Rating Disabilities (VASRD) would go a long way toward speeding up the process of adjudication and appeal, reducing the existing backlog of claims, and improving the accuracy and consistency of decisions. It seems that there would be tremendous value in getting a complete and standardized set of data on each veteran, relevant to his or her particular problems, that

can then be linked to the relevant sections of the Schedule for more accurate ratings, the same way, regardless of the skill of the rater. It seem the Department is busy hiring hundreds of new raters, but has done nothing to improve the underlying antiquity of the process they are being asked to assume. Please tell us what the Department's plans are to automate the VASRD, in order to make claims processing more accurate, timely, and efficient. Do you have the resources and authority you need to carry out such a task?

Response. VBA is receiving more disability claims then at any time in recent history. Our expanded outreach program for active duty servicemembers and members of the National Guard and Reserves, the aging of the veteran population and the progression of their disabilities, and the addition of type-2 diabetes to the list of presumptive disabilities for veterans, who served in Vietnam, are among the major factors driving up claims receipts.

Our incoming claims volume is now 45-percent above our 2000 (year) level. This year, we received 838,000 disability claims, which is 32,000 more claims than last year. At the same time, we are receiving more claims, the claims decision process is becoming longer and more difficult, because veterans today, on average, claim more disabilities than veterans in previous areas and the nature of many of these disabilities is becoming increasingly complex (e.g., serious traumatic injuries, diabetes and its complications, PTSD, undiagnosed illness, etc.). VA must assign a percentage evaluation to each disability determined to be service-related. Changes in law and recent Court decisions have also introduced additional complications into the claims decision process and extended the length of time veterans must wait for decisions on their claims.

Because of the large growth in claims receipts and the increased complexity of the claims, the pending inventory of rating-related claims remains high—391,000 at the end of September 2007. The high volume and complexity of incoming claims also impact average processing time, which is currently 183 days. We have developed a plan to address the workload challenges. While there are many components in this plan, the cornerstone of VB's long-term effort to reduce claims backlogs and improve claims processing timeliness remains unchanged—develop a well-trained workforce that is sized commensurate with current and projected claims workload.

- We are aggressively hiring across the Nation. We have already added over 1,100 new employees since January 2007, and we will add a total of 3,100 by the end of this year.
- Because it takes at least 2 years for a new employee to become fully trained in all aspects of claims processing, we have also significantly increased the use of overtime.
- Additionally, retired claims processors have been recruited to return to work as rehired annuitants, enabling us to increase decision output this year by nearly 16,000 claims. We are continuing to hire additional annuitants.
- To get our new employees productive as early as possible in their VA career, we have modified our new employee training program, to focus initial training on specific claims processing functions. This allows our more experienced employees to focus on the more difficult claims.
- We are looking at additional ways to achieve greater efficiencies in the delivery of disability benefits. We are in the process of centralizing the remaining pension claims workload, which includes original disability and death claims processing, to our three pension maintenance centers. This will allow regional offices to dedicate more resources to compensation claims processing.
- We will also gain processing efficiencies in 2008, through centralization of all compensation and general assistance telephone calls, to nine virtual information call centers.

We are already seeing the results of the increased processing capacity and the initiatives begun earlier last year. On average, we are now producing 5,000 more claims decisions per month.

Chairman AKAKA. Thank you very much for your testimony, Secretary Howard.

Mr. Secretary, under the former decentralized VA IT management structure, field-based innovation and creativity were hallmarks leading to the creation of VA's electronic medical information system. How can you maintain this spirit of innovation and creativity while centralizing most of the decisionmaking in the central office?

Mr. HOWARD. Sir, that is an extremely important question, and one thing we absolutely cannot impact is innovation throughout our medical system. That is for absolute certainty and we do not want to do that. But at the same time, we do need to get better visibility of these innovative ideas and we have begun to establish a program to do precisely that.

In other words, if you are a physician working with your IT community at a hospital, working on a very innovative idea, that is fine. But at some point in the process, we need to make a decision as to what to do with that idea, whether we want to expand it throughout the VA, whether we want to adequately fund it and bring it forward. This is very, very important. We don't want to stop these ideas, but we do want to capture them and distribute them throughout the VA, so that everyone can gain the benefit of this particular innovative idea, and a lot of that is going on.

With the reorganization, we actually have gained more visibility over these ideas than we perhaps have had before. The funding issue, though, is very key, and at some point in that innovative process, we need to decide whether to move forward or whether to stop that particular topic because it doesn't prove to be beneficial.

But IT does not make that decision. A key aspect of your question, sir, deals with the word "requirements." Requirements definition, requirements determination, and requirements prioritization, that is not IT. We have a priority process in place that does involve the administrations. They set the priorities on what should be done. We need to help them, though, in defining those requirements and in making clear the funding aspect of those requirements.

As you can see on that drawing on the left side that I passed out, each of the administrations has got a requirements office that interfaces with us, and this is beginning to happen. We have established a governance process that includes requirements determination.

So in answer to your question, sir, not only do we not want to stop innovation, we want to take advantage of the innovation by spreading it throughout the VA, properly funded, properly supported, and properly supported by the administrations involved.

Chairman AKAKA. Thank you. I am delighted to hear what you said, because I have made comments that we need to restructure VA and not continue structures that we have had in World War II. Things have changed, been very different, and creativity and innovation play a huge part in putting together and developing a system that can help our veterans today and we are looking for that. I am glad you are heading in that direction.

Last year, Mr. Secretary, following the lost laptop, Secretary Nicholson testified that VA intends to become the gold standard for information security within the Federal Government. GAO says in the report released today that VA still has not fully implemented 20 of the 22 GAO and VA IG recommendations necessary to improve information security within the Department. My question to you is, how close is VA to implementing the GAO and IG recommendations, and in your view, how close is VA to becoming the government leader in information security?

Mr. HOWARD. Sir, I agree with the reports that there is a lot more work to be done. There is no question about that. However, with that said, we have made some dramatic strides. 2008, quite frankly, is a key year for us. We now have got some key contracts in place that we have been working on for quite a while. I mentioned a couple of them in my testimony. And although they don't sound important, these are extremely important. Just the one dealing with port monitoring, we have been working through the contracting process to put that in place and now we have the availability to us where you will not be able to put in, for example, an unauthorized thumb drive. You won't be able to do it. It has to be an approved encrypted thumb drive in order even to be able to be used on our system.

This software is beginning to be implemented now throughout the VA because we have received a contract for sufficient licenses to be deployed. That is just one example. You asked when we will be the gold standard. Sir, it is a difficult question. I don't know, to be honest with you. We hope to be very close by the end of this fiscal year, and I have here—you remember my hearing last year and we were all looking at my big plan. Well, you know, I have gotten it and we are working on these actions, but they are not all complete, and if you remember from last year, a good number of them did extend into fiscal year 2008, in some cases, even beyond.

The plan that we have here, and to just refresh your memory, this was the assessment of strengthening of controls program we put in place, continues. We monitor this all the time. A lot of the organizations throughout the VA are involved in it and we intend to keep the pressure on. These programs are in three main areas. The managerial area, and we have made progress. In fact, we finally finished our handbook. It is a very thick handbook that describes the VA security program. In fact, that will be issued here in another week. It includes for the employees the behavior requirements that they must have—standards of behavior is included in that document. Managerial controls include completing these policies that we have to put in place, and we are well on our way to do that.

The organizational controls—the operational controls, rather, deal with the way we do business, and we have instituted a number of those, as well.

And then we have the technical controls, the encryption standards like the port monitoring capability that I have mentioned previously. Another key one that we now have implemented that we have sufficient licenses for is the RMS process. That is a better encryption capability for e-mail. Many of your staff probably have seen our weekly summaries that we send on incident reports and a lot of them deal with unencrypted e-mails. Before, we had PKI. In fact, on my Blackberry here, I can send encrypted e-mails, but it is not robust enough. We now have the right management system that we have sufficient licenses for. This is being distributed throughout the VA. This provides the capability to send a clear e-mail, but encrypt the attachment and a number of options that you can work—much more robust than we have had heretofore. But we are not going to get rid of PKI. We are going to keep that, as well.

In fact, the number of licenses continue to grow and the certificates that people have asked for throughout the VA.

The last thing I want to say in the whole business of achieving the gold standard, sir, has to do with people. The main—the principal issue in all of this is the behavior of our people, the responsible activities—acting responsible and what have you. We have very intensive training programs going on. I know I have the full support of hospital directors and RO directors throughout the VA. There is no question about that. They are behind us in continuing to help educate our staffs and our employees in acting responsibly.

The incident response capability we have put in place—unfortunately, we see a lot of incidents, but at least they are reporting them and it is helping us drive down the serious ones. A good example is back to the Social Security number issue and encrypted e-mails and what have you. We now have in place a capability to shut off an e-mail if a Social Security number is in that particular e-mail, and we have been working on this for a while. When we started monitoring this capability, we saw over 7,000 messages coming through in a particular month that possibly had Social Security numbers embedded in the e-mails.

We started putting a warning sign on the computers that basically said, "You are about to send a Social Security number in this e-mail." We left the warning for a while and we watched it go down dramatically. Now we are at the point where if such an e-mail occurs, we take a look at it. If it does have a Social Security number, we do not let it go through, and it happens fast enough. Why did we wait for a while before we did that? Back to the impact of the business. We were very reluctant to implement a dramatic policy like that without understanding the impact on the business throughout the VA.

I know it is a rather lengthy answer, sir, but it is a very important area, and the last thing I would like to say on all this is sometimes we have to balance it, too. Even Secretary Nicholson said, why don't we implement this right away, and sometimes you need to be careful because you could impact the business. We have got to always keep track of making sure that we can stay actively engaged with our patients. So it has been a real balancing act, but the sum is that we have improved the security situation. Fiscal year 2008 is a key year for us. My plan, we are driving on.

Chairman AKAKA. Thank you, Secretary Howard.

Before I call on Senator Burr, I would like to ask Senator Murray to assume the Chairmanship while I step out to vote in another committee and I will be right back.

Senator BURR? Thank you, Mr. Chairman.

General Howard, welcome. I think it is safe to say there is no louder cheerleader for what you are doing than the Congress of the United States and we all hope that you are successful in the rollout of this new IT structure. As I have heard the specific detail that you are looking at and that you are implementing, it does make me a little bit concerned, and I should share it right up front, that on the back end of this, when we talk about the data sharing with DOD, that we not get so complicated that we create a new barrier to our ability to shift that data from one side to the other.

Let me, if I could, go to some specific questions. You raised a list of seven priorities. If you would, on a scale of one to ten, ten being perfect, would you rate each one of those seven priorities from the standpoint of where you are today in your assessment.

Mr. HOWARD. Yes, sir.

Senator BURR. Thank you.

Mr. HOWARD. Allow me to refer to the priorities. Sir, the first one—you need to get to page two here.

Senator BURR. Page two.

Mr. HOWARD. Sir, the first one is the business of a well-led, high-performing IT organization. I would probably say we are probably at a six there——

Senator BURR. Great.

Mr. HOWARD.—and one of the reasons is—here is a—can I get into a reason, or just——

Senator BURR. If you will, let us just go through the seven of them and——

Mr. HOWARD. I have got you.

Senator BURR. What I am trying to do is to begin to create a baseline.

Mr. HOWARD. Right. I would give that one a 6.

Senator BURR. All right. Number 2?

Mr. HOWARD. Number 2 is probably down around 3 somewhere.

Senator BURR. And number 3?

Mr. HOWARD. That is probably a 2 or a 3. That is pretty low.

Senator BURR. And number 4?

Mr. HOWARD. That is up there. That is about a 7.

Senator BURR. And No. five?

Mr. HOWARD. That is about a 7, also.

Senator BURR. And number 6?

Mr. HOWARD. I would say that is an 8.

Senator BURR. And the last one, number 7?

Mr. HOWARD. That is down around five.

Senator BURR. Great. Great. I really thank you for doing this, because as you know, we have got the GAO coming in, we have got other individuals that will testify, and I think it is important that we have a good understanding not just of what the priorities are but where you are in that process of completing them.

Mr. HOWARD. Sure.

Senator BURR. Now, you said in your testimony that clearly an important question associated with this realignment is how it has impacted the delivery of health care and benefits to our veterans. In my opinion, there has been no significant change in these two areas, which was a key objective of this reorganization, to do no harm. Let me ask you, what matrix did you use to determine that there hadn't been, as you referred to, a significant change, and in using that, do you mean positively and negatively or just negatively?

Mr. HOWARD. Both directions, sir, and significant is the key word. There has been change. I mean, there is no doubt about that. But—and I deliberately stated it that way, that although there have been improvements, they haven't been significant yet. Significant is the key. We are working on that, and there have been some improvements, like, for example, just gaining visibility over the

various innovative ideas that are going on out there. That is a positive step.

Senator BURR. How does an IT section make a determination about the actual delivery of care, though? I mean, is this something that you have reached out with——

Mr. HOWARD. Feedback from the administration, sir, on that part of it.

Senator BURR. You have discussed the efforts of moving the IT organization from a decentralized to a centralized model, and I understand the motivation and what you hope to achieve in budget control, standardization of equipment and processes. However, with a centralized organization, I am concerned about the possibilities of your office losing touch with local IT needs. How will you ensure that the hospitals, and clinics receive the IT support they need, and more importantly, is there a way for them to communicate problems or recommendations up the chain to your office?

Mr. HOWARD. Yes, sir. We have established an organization. In fact, the key one, Ray is in charge of the Field Operations. Most of the individuals that were transferred to us, in fact, work for Ray, almost 4,000. He has organized the country, if you will, into geographic regions where we have regional directors in place. We meet with them very often. The CIOs, the senior IT officials at a hospital or regional office work for those regional directors and they are also in communication. In addition to that, we have established an information security element that also reports to Ray. They are more independent, though. They report almost directly up to the senior level.

Now, if you take an environment at the hospital level, and this is the charge that we have given to the IT individuals throughout our organization, if you are the senior IT person at a hospital, you are like me. Your name is Bob Howard. You put on your Bob Howard mask or whatever, because you are responsible for everything I am responsible for at that particular facility, especially making sure that hospital director is adequately supported. We have preached that time and time again. There should be no question about that. And if you ever run into anybody that doesn't have that message, I would like to know about it because we have clearly driven that point home.

Now, that is difficult for some of them because in the past, they perhaps were just a Member of the staff, you know, on the hospital, and now they have the charge they are out front. You are now right outside the hospital director's office. You have a responsibility here to stay engaged with that individual, to make sure that not only his desires are accounted for, but any problems that he may have.

And along those lines, I mentioned we have our oversight and compliance capability. Arnie Claudio sitting behind me here runs that, and he goes out and he looks not just at the hospital director. He is looking at my people. And we have had a couple of instances where we have taken action because we were not too happy with the way the IT community has been operating. In other words, in our opinion, they were not adequately supporting that hospital director and we will not stand for that.

Now, all of this will take time to put it in place——

Senator BURR. And I appreciate your passion for that because I will assure you, if there is a breakdown, the likelihood is those of us on the dais will be the first to hear about it from an individual or from a specific facility.

With the Senator from Washington's indulgence, I would like to ask one more question, if I could, and it gets at the heart of the VA–DOD seamless transition of health care records. I understand some significant progress has recently been made, but the overall process still seems to be moving pretty slow. In fact, I am aware that the VA has just recently awarded a contract to pay for a study assessing what will be required to create a joint inpatient e-health record. Now, General, I have got to ask you, how is this different than what we have done before?

Mr. HOWARD. Sir, I will say that the activity between us and DOD has been better. It has been more intense. In fact, there are weekly meetings that take place at the Deputy Secretary level——

Senator BURR. But share with me, if you will, what will we learn from this study that we don't know today?

Mr. HOWARD. Sir, one thing that we hope to learn, and maybe clear the air on what we are really talking about, here is a good example. The absolute key in sharing between VA and DOD has to do with data. It has to do with the database itself, not as much with the application. And, you know, we have VistA. DOD has Alta. You don't necessarily have to has an exact replica of each application, but you must have the ability to get at the data and it has to be standardized, and this is a key area that we are focusing on.

I am going to ask Dr. Tibbits in just a minute to chime in on this because he is leading this effort as far as VAIT is concerned.

There is value in coming as close as we can to a single application, but we don't believe it is totally necessary to get this seamless transition that we both want. The key again is in the data set, and that we have a lot of work to do there just in standardizing the data, you know, call an aspirin an aspirin instead of something else. I mean, it sounds ridiculous, but it is true. There is a lot of data standardization work that still remains to be done, so that if a DOD physician is looking at a particular descriptor, it is the same thing that a VA physician might be looking at, and work continues in that area.

Senator BURR. And I hope you would agree that there is a huge difference between two entities using the same descriptor so that you can accurately mine that data and trying to replicate two identical data programs. I mean, Google proved to all of us that they could come up with a way to mine whatever it is we asked them to go into and they could do it in a seamless, quick, and fairly successful way, given how successful the company has been. Yet in government, we seem to be bogged down in not accepting what others have proven to be paradigms that they can break down and overcome and we consistently continue to try to look for what the hurdles are.

I want to hear from the Doctor, but I also just want to express one more time, my hope is that from this study, there is something new that we are attempting to learn, some piece of information

that we don't currently have. If not, I would love to see us bypass a study and begin with further implementation. Doctor——

Mr. HOWARD. Sir, along those lines, I don't believe there is a document, you know, one document, where you can read about both systems in one place, VistA and Alta, and a comparison in detail, you know, not a DOD perspective or a VA perspective, but an independent look at what we really—because, again, making sure we know what we are talking about is awfully important here. This is really complex stuff. I have the famous egg here on the VistA system. I mean, this is really complicated. Of course, Alta is complicated, as well. This study, we think, will help us bridge the knowledge gap and a better understanding of what we are dealing with, but I would ask Paul if he wants to add anything to that.

Dr. TIBBITS. Senator, thank you so much for the opportunity. Well, I can only emphasize what General Howard said. First of all, the study is going to give us a first-time look at both systems side by side from an inpatient perspective. In VA, we happen to have a very integrated capability right now, inpatient, outpatient, the full view of taking care of a patient.

In addition, the study is going to help us clarify objectives, and I want to spend a few seconds on that if I can, on clarification of objectives. It is very clear to me that everyone is rightfully quite interested in information sharing to improve services to veterans. In addition to and over and above that objective, there are other objectives that one could focus on, for example, less costly development of software. Those are not necessarily strongly related objectives to each other. One thing this study is going to do is help tease apart, clarify, and focus people on one objective versus the other and make sure activities align with either one or both as we both come to agree what the objectives are.

Clearly, serving veterans is everybody's highest priority. Information interoperability in the context that you have asked the question is clearly much more important with respect to that objective than is the joint development of software, which at the end of the day, with respect to serving the veterans, is really pretty marginal with respect to its contribution. It might save the Department some money, but it is really not a key to serving the veterans' needs. Standardizing the data and information sharing is.

So over and above the study, you asked what are we doing? Are all of our eggs in one basket with respect to the study itself? The answer is no. Because of the interest of the administration in VA–DOD sharing, this process has been initiated where both Deputy Secretaries, Deputy Secretary of Defense and our Deputy, meet weekly, and therefore there are other meetings at a lower level weekly, which I am involved in. I am co-chair of the Live Action Four For Information Sharing with my counterpart, the Principal Deputy Assistant Secretary of Health Affairs, Dr. Steve Jones, and we are moving beyond just the study.

The study, again, focuses on inpatient, data and applications. We are more broadly interested in serving veterans in the full spectrum of information interoperability, and in fact, less interested broadly in the applications themselves for that reason.

So one of the ideas that we have articulated and Dr. Jones has agreed with, and I don't want to speak for him so you will have

to talk to him, and the customers in VHA who have also agreed, with whom we are working this very closely—to actually look at the two databases underneath both of the Departments' medical records. In our case the Health Data Repository, in the case of the Department of Defense the Clinical Data Repository. Those are the databases.

The real key to information sharing is what do we do in the future with respect to those two databases, irrespective and over and above and totally aside from what we do with the applications. With respect to those two databases, we are actually now beginning to look at what it would take to converge those databases so that, if feasible—and then working out a cost and schedule to do that—if feasible, it would, in fact, not only serve the information interoperability and service objectives of taking care of veterans and active duty servicemembers, but at the same time, largely liberate both Departments from the consternation of which application set you happen to want to use because my application set is better than your application set or whatever it happens to be, or because applications happen to be tailored to the mission of the organization where DOD has a medical support mission in theater which we do not have.

So there are very good reasons why one would want to optimize software applications to do different things while converging the databases underneath. So, per se, it is a much broader look at data than that study itself is intended to focus on and we are moving down that pathway to initiate that assessment ourselves with the VA and DOD, smart people who can do that.

Senator BURR. Doctor, I thank you for that answer because that gives me a much greater assurance that there is some value to, in fact, the study, and I hope all of you know why the question comes, is that we have asked it before. We have gone through a process. I am not sure at that time we knew what it was we were looking for or where it was we were trying to go. I feel fairly confident you know where you want to go and I know from your answer you know what you are looking for. I thank the Senator from Washington.

Senator MURRAY [presiding]. Thank you, Senator Burr, and Mr. Secretary, again, thank you for being here. Let me just follow up on that a little bit.

I think you sense that we are all frustrated that we keep talking about an Electronic Health Care Record system and the date keeps moving out. I understand the complexity of what you just walked through with us, but in 2003, the President's task force told us or recommended that a fully operational Joint Health Care Records System be available by 2003. It is 2007. We are now being told it is going to be 2012. I think we are all really worried that about 2011, we will hear it is 2020. Can you give us a time line of when we can see this?

Mr. HOWARD. Senator Murray, I mentioned for modernizing our application for 2015, and that has been on the table for a while. We share the same frustration you do. This is extremely complex stuff. I mean, it really is, and the estimates that we have laid on the table in the past simply were not accurate. As we dig more and more into this, we find improvements that have to be made in just

program management of some of these activities in order to bring this forward.

The intensity that we now see between DOD and VA—much of that is a result of the press of Congress, as you know—we believe is going to improve things. I feel more comfortable with the time lines that you mentioned than I might have a year ago. And all I can tell you is we will keep the pressure on and continue to work toward a solution as rapidly as we can.

Senator MURRAY. Well, feel the pressure.

Mr. HOWARD. Yes, we do. We do. And we know that you have been generous in the funding side. We are reluctant to ask for money that we don't need. We don't want to——

Senator MURRAY. Twenty-fifteen, that is a long time away for all of the issues that we have seen because of the lack of sharing information and challenges and problems and everything else. That is very hard for me to go home and tell the people I represent that, yes, we have a problem, but it is going to be long past any of us——

Mr. HOWARD. And when I say 2015, this is modernizing this. This is no more VistA. This is a brand new, modernized system. But in that period of time, in fact, I think you have a copy of it in front of you now, if you look at the lower right, you will see the various phases. If you look at that color scheme——

Senator MURRAY. Yes.

Mr. HOWARD.—you will see that whereas the whole egg may go out to 2015, quite a bit of this——

Senator MURRAY. What will we see sooner than that? Let me ask that question.

Mr. HOWARD. Let me ask Paul to answer that.

Dr. TIBBITS. Yes. As General Howard pointed out, the 2015 is for everything you see in that chart, which is the data and the applications in our Department's Electronic Health Record. That is not the schedule for information interoperability between the two Departments. And again, I would encourage you, Senator, and all here to think about the application software versus the data.

While that is going on, we have other activities, some of which I mentioned already, focused on the sharing of the information itself at the database level, which would not require full exporting of all the applications over to the new platform. And interoperability is not an all-or-none phenomenon. It is shades—fortunately or unfortunately, comes in shades of gray, and the shades of gray are anything from what would amount to a computerized fax, where electronically information is sent back and forth that is not computable but electronic, all the way over to fully interoperable data where my blood pressure in one system and my blood pressure in another system can be put together on one chart and added, subtracted, multiplied, and divided together, fully computable data.

Those activities are underway now, and the reason we can't provide you—I cannot with confidence provide you an answer to the schedule question, it is not that date, it is the mix of standardization work, which you know to have been going on already to make sure when I say blood pressure and you say blood pressure we mean exactly the same thing, that is the main standardization work. That is very painful, laborious work for which we still need

to articulate a full schedule between the two Departments, which is not necessarily 2015.

On top of that, however, I want to add that there is a lot of value in health care delivery to the exchange of information electronically that is not fully computable. That can happen faster. It does not require full domain standardization and that would require, in order to approach this in a rational way, to focus on the high-priority problems that we in the Department and DOD are now experiencing, Traumatic Brain Injury, PTSD, et cetera, et cetera. What is the structured, computable data that relates to those conditions? What is the unstructured and heretofore non-computable data that relates to those conditions? Putting a plan together whereby both of those together get shared between both Departments, and nothing I just said requires standardization of the application——

Senator MURRAY. I think we all are beginning to understand the complexity of this, but on the other side, we have got to keep the pressure on. This has to be done. There are too many problems with the current system and we want to see improvements, and I know my constituents do, the people who use these records.

Let me go back, Secretary Howard. I know in my opening statement I mentioned this issue, and I know both Senator Akaka and Burr did, too, that I think we all get that there are clear benefits from centralizing your IT system, as you shared with us. But we are hearing from some of our local VAs that they are very concerned that the centralized model will take away some of their ability for innovation and flexibility, particularly in perhaps purchasing. I just want to ask you how you are going to make sure that we don't lose that really important flexibility at the local level.

Mr. HOWARD. Ma'am, communication is the key to that and we do have very good communication with the individuals that we support, you know, from the administrations. We clearly do not want to impact that negatively.

What they are experiencing, though, there is a bit of frustration. If I was a hospital director, I got my resources, I got what I needed to do my job, fully decentralized operation, quite frankly, there is probably no one in this room that would prefer not to operate that way. That is a good way to operate. The only difficulty is a big organization like we have, if you don't keep adequate control over that, you begin to lose standardization and interoperability, which is where we find ourselves today. So the idea is to try to centralize those activities but without excluding the individuals that we are supporting, and there is no intent to do that.

Communication is the key. We do have a governance process in place where there is active involvement from the administrations and the staff agencies that we support. I can assure you that as far as my objective is concerned, our objective is clear, an open transparency, open communications.

Senator MURRAY. OK. I did want to ask you about communications, too, because as you recall, when the VA lost the information of 26.5 million veterans a while back, reporting that was a huge issue. Congress didn't know about it immediately. People who were affected did not know about it. Apparently information was out there. Two weeks later, Congress was told about it. Two weeks after that, we were told that 50,000 Navy personnel were affected.

The next day, it was another figure and more people. What have we done to make sure that if a breach occurs today, that the information is there immediately so those people whose information has been impacted will know right away?

Mr. HOWARD. Senator Murray, we have got a lot of initiatives going on here, but if there is one area where we have absolutely improved things, it is in the incident reporting and incident response area. There is no doubt about that. Incidents are now reported very rapidly all the way up to the Secretary. As soon as I read the daily incident reports, a copy is at the Secretary's level also. There is no reading the thing and massaging it before it goes, and to U.S. CERT, to the Computer Emergency Response Team. You know, we have to report within 1 hour. We don't even think about it. It goes right to them as soon as it comes to us.

Now, what that has resulted in is a lengthy list of incidents, because what we have told people, again, if you even think that you have an incident, don't think too long. Get it reported so we can do something about it. We would much rather have that than worry about the length of our reporting, our reporting list.

Senator MURRAY. What happened in between.

Mr. HOWARD. So the thing is that we also have weekly meetings to resolve these. If we don't have sufficient information regarding a particular incident, we demand that and issue papers and what have you. As I mentioned, my oversight and compliance team led by Arnie Claudio is constantly moving. He has done almost 95 assessments since January, looking at the hospitals, looking at things that are wrong that may never make the incident reports because they catch them in time. They have also discovered things that they have reported in our incident response program.

So that area, I feel fairly comfortable that we are at least able to capture the incidents and adequately report them and then do something about them.

Senator MURRAY. OK. Mr. Chairman, I just have one additional question. I wanted to ask you, I understand that there was a recent outage of the VA's electronic medical information that affected about 17 of our VA medical centers. Can you share with us what the impact of that outage was on their operations and what we are doing to prevent that from happening again?

Mr. HOWARD. Yes. This was a big deal and we are very, very concerned about it. This refers to the Regional Data Processing Center Initiative that I believe you are aware of. The Regional Data Processing Center Program was put in place in response to 9/11, to serious incidents like that, and what we mainly were concerned about was the loss of the information. And so we began to migrate VistA systems into highly protected data centers, and this is a tier four data center that you are referring to in Sacramento.

What we did not do, and first of all, that incident was inexcusable. The fact of the matter is we were down for too long. There was human error involved, probably the press of business, you know, thinking that this particular act would solve the problem and bring the systems back up, in fact, was wrong. It did not solve the problem and the system went down again.

And so we have corrected that. In fact, Arnie Claudio, my oversight people were on the scene. We also have a team that is cur-

rently at work trying to examine in great detail what might have happened. And in addition, we are putting a contract in place for an independent look at just what we are doing here, because what we have discovered is the VistA application itself is perhaps—does not really lend itself to a robust Regional Data Processing Initiative like that. We need to understand that better.

The final thing I will say about it that we have discovered is the read-only capability at the hospitals. In other words, the systems went down in the Regional Data Processing Center, but there was a read-only capability at hospital level. What we have discovered is that at some hospitals that read-only capability was not robust enough. We don't know why. We may not have done that in the past. But that can't happen.

In fact, in one hospital, they were only able to accommodate 300 users. Well, that is not good enough. You know, at a hospital level, you need to be able to sign in and sign out a lot more than 300. So we are taking a look at that. We clearly need to provide a more robust back-up capability and a fail-over capability because if it is a finance system that goes down, you might be able to afford a few hours' wait. You can't afford that with hospitals and we clearly understand that. We are examining it in great detail. In fact, I have directed no further migration of the VistA systems into the Regional Data Processing Centers until we can understand in detail what is going on.

There is some concern over distances. You know, on the West Coast, the hospitals are much more spread out geographically, as you well know. That may be a factor in what we are experiencing——

Senator MURRAY. Well, if I can ask you to share with this Committee the information as you get it from what happened and what you are doing to respond and make sure that we are doing everything we can to fix that, I would appreciate it.

Mr. HOWARD. We will, Senator Murray.

Senator MURRAY. Thank you. Mr. Chairman.

Chairman AKAKA [presiding]. Thank you very much, Senator Murray, for your questions.

I understand, Mr. Secretary, that almost a year ago, VBA asked for access to the Electronic Health Record files because of the delays in processing claims and this request has not been approved. It is my further understanding that VBA will not be able to view these records until sometime in 2008. Now, Secretary, during an oversight visit to the Honolulu regional office, Committee staff learned that claims are being delayed because VBA staff are not able to read medical reports which are scanned into VHA's electronic health system.

Given the current backlog in claims processing, this seems like an IT solution that should be given a priority, and you mentioned priorities being important here. So my question to you is what can be done to improve the electronic transmission of medical information from in-house VHA to VBA in a more timely manner?

Mr. HOWARD. I am going to ask Dr. Tibbits to answer that, but I will say one thing, sir. In what you are describing, there is always a concern over security and privacy. In other words, we are dealing with health information and that is one of the things that when-

ever we permit another agency to look at our information, the security and the privacy aspect of it is extremely important and we need to make sure those procedures are in place during the transmittal of the information. But I would ask Dr. Tibbits to comment on that.

Dr. TIBBITS. Senator, thank you for your question. First, let me start off by saying I am going to plead ignorance here and tell you I am going to have to take your question for the record and get back to you with a more specific answer. That said, I work very closely, I would say nearly on a daily basis, with the key business leaders inside of the Veteran Business Administration, VBA. None of them have told me that there is a pending request to view medical data that they currently view as high priority that we have not been able to address, so I want to find out exactly what that is and let you know with more specificity.

That said, there are capabilities in place today by which the medical data, to some extent, medical data can be viewed by claims administrators for the purpose of processing benefits claims. Why that might not be adequate or what additional capability they need, I am going to need to go back and find out. That is not a request that I am actually aware of.

Chairman AKAKA. Thank you. As you can see, as was said, to wait until 2008 really delays the system.

Secretary Howard, as I mentioned in my opening statement, my requested investigation on VHA's waiting times yielded findings about the accuracy and completeness of the waiting lists. Senator Tester has also brought my attention to the need to refine the pharmacy ordering system so that prescriptions aren't mailed out to veterans until they are needed. Is responsibility for matters such as fixing the electronic waiting list and refining pharmacy systems your responsibility or does that still vest in VHA?

Mr. HOWARD. Sir, defining the requirement is VHA. Solving the problem is primarily VHA, but clearly we can provide assistance in the IT arena because sometimes the solution may not be totally IT. It may be a methodology kind of fix that needs to be put in place. But the requirement definition of it, prioritization of it, having us work on it, that is a VHA responsibility.

Chairman AKAKA. Do you happen to know what priority does VA place on finding specific health information solutions?

Mr. HOWARD. On that one, sir, I would have to get back to you. I don't know where that would lie on the list.

Chairman AKAKA. Thank you. Secretary Howard, I understand there was a recent outage of VA's electronic medical information system that affected 17 VA medical centers. What was the impact of this outage on these facilities' operations and what is VA doing to prevent this from recurring?

Mr. HOWARD. Yes, sir. In fact, Senator Murray asked a similar question. This involved the Regional Data Processing Center out in Sacramento. We experienced difficulties in input-output loads, excessive times involved. The system did go down. The reason the number of hospitals, there were 17 hospitals affected was because we had regionalized the VistA systems and this regionalization was done in order to better protect the information involved. In other

words, it actually went all the way back to 9/11. This program itself has been in existence for a number of years.

In this particular case, human error was involved. A fix was made to the system that should not have been made. They did that in order to try to bring it up and that did not happen. It went down again. In hindsight, another mistake that was made is that they did not make the decision to fail-over these particular VistA systems to our back-up in Denver, Colorado, which could have been done. So there were a number of mistakes made.

We have already conducted several reviews of what happened and we are going to conduct a third. The third review will be much more comprehensive because we now want to take a very hard look at what we are doing with respect to regional data processing across the country, to include not only the VistA systems, but some of our corporate data assets, like, for example, in our Austin Automation Center, Hines, and Philly, which weren't part of this particular program in the past.

There are other aspects of what we have discovered. For example, in order to provide a back-up capability, we actually do have read-only VistA capability remain at the hospital level. They did have this read-only capability. However, in a couple of instances, we have discovered that was not robust enough and we need to correct that. The read-only capability must be adequate to support the particular hospital that has it.

So in summary, this resulted from human error, but it has also surfaced some issues that we need to address very quickly here because this whole program is extremely important, because we do need to protect the information inside very well-protected data centers, which is what the Sacramento data center was, a tier four, very—and all kinds of organizations are moving toward that way of doing business, you know, putting their data inside very highly protected data centers. We need to step back and make sure that the VA's program makes sense and that we are not pushing things too fast and that we have the right back-up capability in place in order to continue to support the mission.

Chairman AKAKA. Secretary Howard, it seems as though VA has been in the process of modernizing its health and benefits IT systems for years. GAO reviews have consistently cited poor program management as one of the major reasons for a lack of progress. What is VA doing to address the issue of improving the program management for the modernization of its health and benefits IT systems, and what is the timeframe for completing the migration of VistA and BDN to modern IT platforms?

Mr. HOWARD. Sir, I am going to ask Paul Tibbits in a minute to describe the specifics of the migration, because it is a multi-year process both with respect to VistA modernization and the VETSNET in support of VBA.

On the discipline aspect within program management, you hit the nail on the head. We have clearly seen that. There have been a number of studies. In fact, Carnegie Mellon did a study, as well, that highlighted that as a problem. Fortunately, Dr. Paul Tibbits has a great deal of DOD experience in the acquisition process, a disciplined acquisition process which, quite frankly, we do not have to the degree we need to in the VA. We have recognized that. Dr.

Tibbits is well on the way to solving that problem, to provide adequate baselines, cost, and performance, earned value metrics, all of those things that need to be done within a robust, well-disciplined acquisition and program management process.

We are on the way to improving that, but I will tell you, we have got a long way to go, and I would ask Paul Tibbits to comment, because he is in charge of the program managers that you are referring to.

Chairman AKAKA. Thank you.

Dr. TIBBITS. Senator, thank you very much for the very important question. Actually, the two are quite related to each other, the program management and the BDN migration, and let me just start off with that relationship, which I think, by the way, my personal opinion is that the centralization of IT authority in the Department positions the Department very well to do the workforce reshaping necessary to inculcate those disciplines which you are referring to were absent in the past.

In any case, when my organization was stood up, which was really April of this year, I was fortunate to inherit the VETSNET Program, which over the preceding 18 months or so, in responding to specific findings of a Carnegie Mellon study, had set up an excellence governance and program management structure, in fact, good enough in my view that it has served as a template of program management and governance which we are, in fact, exporting to the rest of VA and to other programs.

I mention that because that is an example of a very good program management discipline applied specifically to the problem you asked about, which is migration off of BDN. So that particular piece of the Benefits Delivery Network system is being delivered on time, at cost, as promised, based on a schedule that was created, I would say, approximately 18 months ago, and much of that due to careful oversight by both VBA itself and external entities, MITRE, in making sure that the recommendations of the Carnegie Mellon study were, in fact, institutionalized in the way that program is managed.

We are now challenged with taking that as a model and exporting it throughout the rest of the VBA and the rest of VA. We have done so in our FLITE program, for example, which is the internal financial management and logistics system. We have exactly patterned, and now have approved and have actually stood up a governance structure on top of FLITE which is a template and replicate of the governance structure that was set up by VBA on top of VETSNET.

The rest of the capabilities, education, vocational rehab on VETSNET migration, using that discipline, we are approaching in two ways. One, a code migration pathway which will give us exactly the same functionality but in new software, and a separate set of initiatives which will give us new functionality and new software, two different pathways to get off of that industrial—a system that has exceeded its industrial life.

The target date for both of those is 2011. Right now, that is our target date to complete both of those pathways. Whether we will have to, in fact, continue down both of them will remain to be seen as we learn more about each of those pathways as we go along. But

at the moment, we are wearing belt and suspenders with respect to trying to get off of that platform. That is the program management discipline piece and how we have applied it to migration off of BDM.

Chairman AKAKA. Well, I want to thank you, Dr. Tibbits, and, of course, Mr. Secretary for being here today.

There has been a vote that has been called. It is on now, and so I want to thank you for your testimony. Without question, it is going to be helpful. At least we have timeframes here to look at and we have an idea of how we are approaching the kind of problems that we are facing, as well, in the system. As you mentioned, Mr. Secretary, it is not the technology, it is really the ability of the managers and you have filled that slot real well and we are looking forward to continuing to work with you on this.

We will take a recess now for 10 minutes and I will be back after that vote and we will have them panel two. Thank you very much, and this Committee hearing is in recess.

Mr. HOWARD. Thank you, sir.

[Recess.]

Chairman AKAKA. Will the panel please be seated. The hearing will come to order.

I am pleased to welcome our second panel. First, is Valerie Melvin, the Director of Human Capital and Management Information Systems Issues at GAO. Next is Stephen Lucas, the Director of the James A. Haley VA Medical Center in Tampa, Florida. Then we have Kim Graves, the Special Assistant to the Under Secretary for Benefits at VA, who has a particular responsibility for IT matters in VBA. Last is Dr. John Glaser, the Vice President and CIO of Partners HealthCare in Boston, Massachusetts.

I want to thank you all for being here and look forward to your testimony. The witnesses will testify in the order that I just introduced you. I ask that you keep your statements to 5 minutes. Your full statements will be included in the record.

Ms. MELVIN?

STATEMENT OF VALERIE MELVIN, DIRECTOR, HUMAN CAPITAL AND MANAGEMENT INFORMATION SYSTEMS ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE; ACCOMPANIED BY McCOY WILLIAMS, DIRECTOR, FINANCIAL MANAGEMENT AND ASSURANCE TEAM, U.S. GOVERNMENT ACCOUNTABILITY OFFICE; GREGORY WILSHUSEN, DIRECTOR, INFORMATION SECURITY ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE; AND BARBARA OLIVER, ASSISTANT DIRECTOR, INFORMATION TECHNOLOGY, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Ms. MELVIN. Mr. Chairman, thank you for inviting me to discuss VA's Information Technology Program. In serving our Nation's veterans, VA spends about $1 billion annually on information technology, but the Department has been challenged in managing its IT programs and initiatives. To address this challenge, VA is realigning its organization to centralize IT under the Chief Information Officer, guided by a defined set of improved management processes. VA began this realignment in October 2005 and plans to complete it by July 2008.

At your request, my testimony today summarizes our previous work on the Department's realignment efforts. In this context, I will also briefly discuss our recent work on several of the Department's IT programs and initiatives, including information security, inventory control over IT equipment, the modernization of existing benefits systems, and sharing electronic health information with the Department of Defense.

In short, VA has made progress in moving to a centralized structure. However, when we last reported in June, it still had to address several of six factors that we identified as critical to a successful transformation. In this regard, it either acted or indicated intent to act on all except one factor, to dedicate an implementation team to manage this important change.

In addition, while improved management processes are a cornerstone of the realignment, as of May, VA had not made significant progress, having only begun to pilot test two of 36 planned new processes. In our view, an implementation team and established management processes are fundamental to the overall success of the realignment initiative.

In the meantime, VA has ongoing programs and systems development initiatives that depend on effective management and use of IT resources, the essence of the realignment. Our recent studies have noted measures of progress in these areas, but more work remains, including addressing numerous and longstanding information security recommendations that we and the Department's Inspector General have made.

For example, our report being released today notes that although VA has made progress, it has not yet fully implemented numerous recommendations to strengthen its information security practices. Also, while it has begun to realign its security program, it has not completed development of improved security management processes or ensured effective coordination between organizations responsible for information security functions.

In addition, our prior work noted that VA had taken certain steps to strengthen controls over IT equipment, such as clarifying property management policies. Overall, however, it had not ensured consistent implementation of controls to effectively account for its IT equipment inventory.

Regarding VA's modernization of existing benefits systems, our recommendations have placed particular emphasis on the need for comprehensive planning. In turn, we recently noted after the implementation of improved management processes, progress on the Veterans Benefits Administration's new compensation and pension benefits system. Further systems development is needed, however, and certain process improvements must still be institutionalized to realize continued success.

In VA's effort to share electronic health information with DOD, a milestone was achieved when the two Departments began exchanging limited medical data at selected sites through an interface between their respective new data repositories. However, to fulfill the long-term vision of a comprehensive electronic medical record, much work is still needed, including effectively planning and managing efforts to expand data sharing among both Departments.

In summary, Mr. Chairman, VA is making progress in its IT realignment, but important work remains to ensure that effective management processes exist and that its IT programs and initiatives are fully and successfully implemented. Further progress in these areas could be significantly aided by the key management processes that are the cornerstone of the realignment. Until these processes are fully institutionalized throughout the Department, VA may not realize the full benefits of the realignment or achieve its many IT goals.

This concludes my prepared statement and I would be happy to respond to any questions that you may have.

[The prepared statement of Ms. Melvin follows:]

PREPARED STATEMENT OF VALARIE C. MELVIN, DIRECTOR, HUMAN CAPITAL AND MANAGEMENT INFORMATION SYSTEMS ISSUES

Mr. Chairman and Members of the Committee:

I am pleased to participate in today's hearing on the information technology program of the Department of Veterans Affairs (VA). As you know, the department depends on information technology (IT) to effectively serve our nation's veterans, with an IT budget that amounts to about $1 billion annually. However, VA has encountered numerous challenges in managing its IT resources, as we have reported over the years. In our more recent reporting, we have identified challenges in security management, inventory control, project management, and other IT management processes.[1] One factor contributing to the development of these challenges has been the department's management structure,[2] which until recently was decentralized and gave the VA administrations[3] and headquarters offices[4] control over a majority of the department's IT budget.

In October 2005, VA initiated a realignment of its IT program to provide greater authority and accountability over its resources. The goals of the realignment were to centralize IT management under the department-level Chief Information Officer (CIO) and to standardize operations and development of systems across the department through the use of new management processes based on

[1]For example, GAO, *Information Security: Sustained Management Commitment and Oversight Are Vital to Resolving Long-standing Weaknesses at the Department of Veterans Affairs*, GAO-07-1019 (Washington, D.C.: Sept. 7, 2007); *Veterans Affairs: Inadequate Controls over IT Equipment at Selected VA Locations Pose Continuing Risk of Theft, Loss, and Misappropriation*, GAO-07-505 (Washington, D.C.: July 16, 2007); *Veterans Affairs: Lack of Accountability and Control Weaknesses over IT Equipment at Selected VA Locations*, GAO-07-1100T (Washington, D.C.: July 24, 2007); and *Veterans Benefits Administration: Progress Made in Long-Term Effort to Replace Benefits Payment System, but Challenges Persist*, GAO-07-614 (Washington, D.C.: Apr. 27, 2007).

[2]GAO, *Veterans Affairs: The Role of the Chief Information Officer in Effectively Managing Information Technology*, GAO-06-201T (Washington, D.C.: Oct. 20, 2005); and *Veterans Affairs: The Critical Role of the Chief Information Officer Position in Effective Information Technology Management*, GAO-05-1017T (Washington, D.C.: Sept. 14, 2005).

[3]The VA comprises three separate administrations: the Veterans Benefits Administration, the Veterans Health Administration, and the National Cemetery Administration.

[4]The headquarters offices include the Office of the Secretary, six Assistant Secretaries, and three VA-level staff offices.

industry best practices. Completion of the realignment is scheduled for July 2008.

At your request, my testimony today will summarize our work on the department's efforts in moving to a centralized IT management model, which will affect all of VA's IT programs and initiatives. In this context, we will also discuss our recent work on

- information security,
- inventory control over IT equipment,
- migrating existing ("legacy") benefits systems to modern platforms, and
- sharing electronic health information with the Department of Defense (DOD) and the prognosis for a DOD/VA bidirectional interoperable electronic health record.

In developing this testimony, we reviewed our previous work in these areas. All work covered in this testimony was performed in accordance with generally accepted government auditing standards.

Results in Brief

VA has made progress in moving to a centralized management structure for IT; however, at the time of our review in May 2007, it had still to address some critical success factors for transformation, and it had not yet institutionalized key IT management processes.[5] The department's plans for realigning the management of its IT program include elements of several of the six factors that we identified as critical for its implementation of a centralized management structure. However, as of May 2007, VA did not plan to address one of the critical success factors: dedicating an

[5]GAO, *Veterans Affairs: Continued Focus on Critical Success Factors Is Essential to Achieving Information Technology Realignment*, GAO-07-844 (Washington, D.C.: June 15, 2007).

implementation team to manage change. Having such a team is important at this stage, because the realignment is not expected to be completed until July 2008. Without a team dedicated to managing the realignment, it is less likely that the department will be able to ensure that the realignment is managed effectively throughout its implementation. In addition, although the department had begun to take action to establish improved IT management processes—a cornerstone of the realignment—it had not made significant progress at the time of our report. As of May 2007, it had begun pilot testing 2 of 36 planned new processes. Until it institutionalizes key management processes throughout the department, the full benefits of the realignment may not be realized.

In the meantime, VA is undertaking a number of programs and initiatives that depend on the effective management and use of IT resources. The department has made progress in its programs and initiatives, but much work remains.

- In a September 2007 report, we state that although VA has made progress in addressing security weaknesses, it has not yet fully implemented key recommendations to strengthen its information security practices.[6] In addition, although the management structure for information security has changed under the realignment, improved security management processes have not yet been completely developed and implemented, and responsibility for the department's information security functions is divided between two organizations, with no documented process for the two offices to coordinate with each other.
- With regard to the department's IT inventory control, we reported recently that a weak overall control environment for IT equipment at four audited locations posed a significant security vulnerability to the nation's veterans with regard to sensitive data maintained on

[6]GAO, *Information Security: Sustained Management Commitment and Oversight Are Vital to Resolving Long-standing Weaknesses at the Department of Veterans Affairs*, GAO-07-1019 (Washington, D.C.: Sept. 7, 2007).

this equipment.[7] VA had taken some actions to improve controls over IT equipment, such as issuing several new policies to establish guidance and controls for information security. In addition, the organizational realignment had begun, but as it was not yet fully implemented, improved processes for inventory control had not been established.

- VBA has been pursuing efforts to migrate benefits processing from its aging legacy system and develop modernized replacement systems.[8] We reported that two initiatives (one on compensation and pension payments and another on education benefits) had both been hindered by project management weaknesses and in particular the lack of integrated project plans. In April 2007, we reported that the compensation and pension replacement project had improved its management processes and made progress; VA concurred with our recommendation that the improved processes be incorporated into specific policy and guidance for all IT projects in the department. Such processes could benefit the education benefits project: when we reported in July 2007, the initiative had achieved some enhancements in claims processing, but the absence of an integrated project plan meant that critical elements were missing for effectively guiding the project to completion, such as an overall approach for coordinating various improvement initiatives.

- As we testified in May 2007, VA and DOD have made progress in both long- and short-term initiatives to share health information, but much work remains to achieve the goal of a shared electronic

[7]GAO, *Veterans Affairs: Inadequate Controls over IT Equipment at Selected VA Locations Pose Continuing Risk of Theft, Loss, and Misappropriation,* GAO-07-505 (Washington, D.C.: July 16, 2007) and *Veterans Affairs: Lack of Accountability and Control Weaknesses over IT Equipment at Selected VA Locations,* GAO-07-1100T (Washington, D.C.: July 24, 2007).

[8]GAO, *Veterans Benefits Administration: Progress Made in Long-Term Effort to Replace Benefits Payment System, but Challenges Persist,* GAO-07-614 (Washington, D.C.: Apr. 27, 2007), and *Veterans Affairs: Improved Planning Needed to Guide Development and Implementation of Education Benefits System,* GAO-07-1045 (Washington, D.C.: July 31, 2007).

medical record and seamless transition between the two departments.[9]

- Under their long-term initiative, the departments had begun to exchange limited medical data (at selected sites) through an interface between the data repositories for the modern health information systems that each department is developing. Although implementing this interface is a milestone toward the departments' long-term goal, VA and DOD must still extend the current capability throughout both departments, finish developing their two modernized systems, and transition from their existing systems.[10] The departments have not yet projected a final completion date for the whole initiative.

- In their near-term efforts, the departments have completed a system for one-way transfer of health information from DOD to VA when service members leave the military, and they are conducting demonstration projects to exchange limited data at selected sites. The departments have also established ad hoc processes (such as scanning paper records) to meet the immediate need to provide data on severely wounded service members to VA's polytrauma centers.

These multiple initiatives and ad hoc processes highlight the need for a project plan that integrates both long- and short-term initiatives. Without such a plan, it remains unclear how all the initiatives are to be incorporated into an overall strategy focused on achieving the departments' goal of comprehensive, seamless exchange of health information.

In the reports covered by this testimony, we have made numerous recommendations aimed at improving the department's

[9]GAO, *Information Technology: VA and DOD Are Making Progress in Sharing Medical Information, but Are Far from Comprehensive Electronic Medical Records*, GAO-07-852T (Washington, D.C.: May 8, 2007).

[10]Among other tasks required to complete development, the two departments must agree to standards and populate the data repositories for the categories of medical information that have not yet been addressed: that is, all categories except outpatient pharmacy and drug allergy data.

management of its IT programs and initiatives. VA has agreed with these recommendations and has taken action or plans to take action to implement them. If this implementation is properly executed, it could help the department to realize the expected benefits of the realignment, as well as the aims of its programs and initiatives.

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. Its three major components, the Veterans Benefits Administration (VBA), the Veterans Health Administration (VHA), and the National Cemetery Administration, are primarily responsible for carrying out this mission. Over time, the use of IT has become increasingly crucial to the department's effort to provide benefits and services. VA relies on its systems for providing access to medical information to ensure high-quality health care for veterans as well as for processing benefit claims, including compensation and pension and education benefits.

In reporting on VA's IT management over the past several years, we have highlighted challenges the department has faced in achieving its vision of creating "One VA"—that is, integrating IT resources to enable department employees to help veterans obtain services and information more quickly and effectively. One major challenge was that the department's information systems and services were highly decentralized and that its administrations controlled a majority of the IT budget.[11] As we have previously pointed out, it is crucial for the department CIO to ensure that well-established and integrated processes for leading, managing, and controlling investments are

[11]For example, according to an October 2005 memorandum from the former CIO to the Secretary of Veterans Affairs, the CIO had direct control over only 3 percent of the department's IT budget and 6 percent of the department's IT personnel. In addition, in the department's fiscal year 2006 IT budget request, the Veterans Health Administration was identified to receive 88 percent of the requested funding, while the department was identified to receive only 4 percent.

followed throughout the department. Similarly, a contractor's assessment of VA's IT organizational alignment, issued in February 2005, noted the lack of control over how and when money is spent.[12] The assessment found that project managers within the administrations had the ability to shift money to support individual projects. Also, according to the assessment, the focus of department-level management was only on reporting expenditures to the Office of Management and Budget and Congress, rather than on managing these expenditures within the department.

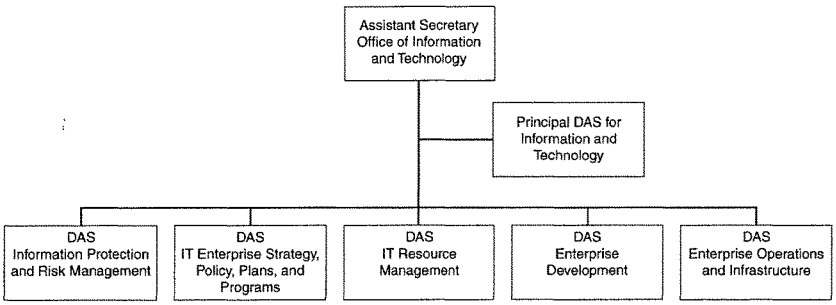
VA Is Transforming its IT Organization to a Centralized Model

In response to the challenges that we and others noted, the department officially began its effort to provide the CIO with greater authority over IT in October 2005. At that time, the Secretary issued an executive decision memorandum granting approval for the development of a new IT management structure for the department. According to VA, its goals in moving to centralized management are to provide the department better oversight over the standardization, compatibility, and interoperability of IT systems, as well as better overall fiscal discipline for the budget. By July 2006, the department's realignment contractor began work to assist with the realignment effort.

In February 2007, the Secretary approved the department's new organization structure, which includes the Assistant Secretary for Information and Technology, who serves as VA's CIO. As shown in figure 1, the CIO is supported by a Principal Deputy Assistant Secretary and five Deputy Assistant Secretaries—new senior leadership positions created to assist the CIO in overseeing functions such as cyber security, IT portfolio management, systems development, and IT operations.

[12]Gartner Consulting, *OneVA IT Organizational Alignment Assessment Project "As-Is" Baseline* (McLean, Virginia; Feb. 18, 2005).

Figure 1: Organizational Chart for VA Office of Information and Technology



Source: VA.

Note: DAS = Deputy Assistant Secretary.

In April 2007, the Secretary approved a governance plan that is intended to enable the Office of Information and Technology to centralize its decision making. The plan describes the relationship between IT governance and departmental governance and the approach the department intends to take to enhance governance.

VA's Realignment Depends on Establishing Standardized IT Management Processes

As the foundation for its realignment, VA plans to implement improved management processes in five key areas: enterprise management, business management, business application management, infrastructure, and service support. The particular management processes, recommended by the department's realignment contractor, were based on industry best practices[13] and encompass all areas of IT management, such as those necessary for

[13]Specifically, these processes are derived from the IT Governance Institute's *Control Objectives for Information and Related Technology (CobiT®)* and *Information Technology Infrastructure Library (ITIL)* as configured by the *Process Reference Model for IT (PRM-IT)* from a VA contractor.

effective IT programs (such as security management and asset management processes) and IT initiatives (such as risk management and project management processes). In attachment 1, we provide brief descriptions of the 36 IT management processes to be addressed in VA's realignment.

According to the contractor, establishing improved management processes and standardizing these processes across the department are essential to the effectiveness of the centralized management model. By implementing these improved processes, VA expects to correct deficiencies it has encountered as a result of its decentralized management approach. Proper implementation should result in institutionalizing best management practices that will be sustained regardless of future leadership changes at the department. According to the contractor, with a system of defined management processes, the Office of Information and Technology could quickly and accurately change the way IT supports the department. The contractor also noted that failure to include such processes in the realignment would introduce the risk that any progress in completing the realignment would be the result of trial and error.

Successful Organization Transformations Are Based on Critical Success Factors

We have reported in the past[14] on key factors that are needed in order to successfully transform an organization to be more results oriented, customer focused, and collaborative in nature. We reported that large-scale change management initiatives are not simple endeavors and require the concentrated efforts of both leadership and employees to realize intended synergies and to accomplish new organizational goals. We also noted that there are a number of key practices that can serve as the basis for federal agencies to transform their cultures in response to governance challenges, such as those that an organization like VA might face when transforming to a centralized IT management structure.

[14]GAO, *Results-Oriented Cultures: Implementation Steps to Assist Mergers and Orgnizational Transformations*, GAO-03-669 (Washington, D.C.: July 2, 2003); and *Highlights of a GAO Forum: Mergers and Transformations: Lessons Learned for a Department of Homeland Security and Other Federal Agencies*, GAO-03-293SP (Washington, D.C.: Nov. 14, 2002).

Among the significant factors we identified as critical for ensuring the success of VA's move to centralized management are

- ensuring commitment from top leadership,
- establishing a governance structure to manage resources,
- linking the IT strategic plan to the organization strategic plan,
- using workforce strategic management to identify proper roles for all employees,
- communicating change to all stakeholders, and
- dedicating an implementation team to manage change.

Successful Implementation of the Realignment Effort Requires Continued Focus on Critical Success Factors and Implementation of Improved Management Processes

In our recent review of the department's effort to realign its IT program, we evaluated, among other things, whether the realignment plan includes the critical factors for successful transformation as discussed above.[15] We reported that VA's realignment plan included elements of several of the six critical success factors that we identified. However, VA had not fully addressed all six factors. Only one factor had been fully addressed; additional work remained on the other five factors, as shown in table 1.

[15]GAO, *Veterans Affairs: Continued Focus on Critical Success Factors Is Essential to Achieving Information Technology Realignment*, GAO-07-844 (Washington, D.C.: June 15, 2007).

Table 1: Summary of VA's Actions Addressing Critical Success Factors as of May 2007

Critical success factor	Addressed	Progress
Ensuring commitment from top leadership	Yes	Secretary approved the new IT organization structure and the transfer of employees
Establishing a governance structure to manage resources	Partially	Secretary approved the IT governance plan, but VA has not established IT governance boards or process descriptions for centrally managing IT
Linking IT strategic plan to organization strategic plan	No	VA has not yet updated its IT strategic plan to reflect the new organization, but it has established a date by which it intends to update the plan
Using workforce strategic management to identify proper roles for all employees	Partially	VA has identified workforce management responsibilities, but it has not established a knowledge and skills inventory
Communicating change to all stakeholders	Partially	VA has addressed staff concerns about the realignment through memorandums and conferences, but it has not fully staffed offices that will facilitate communication
Dedicating an implementation team to manage change	No	VA does not plan to establish a realignment implementation team

Source: GAO.

The department had fully addressed the first critical success factor, ensuring commitment from top leadership, as demonstrated by the Secretary's actions in support of the realignment. Besides approving the transfer of personnel to the centralized office, the Secretary approved in February 2007 a new organization structure for centralized IT management.

Since undertaking the realignment, VA concentrated its efforts on transferring approximately 6,000 staff to the CIO's office from the administrations and staff offices and on creating the new centralized organizational structure. As shown in the table, VA had begun or planned to begin actions on four other critical success factors, but it had not completed the actions. For example, the department approved its governance plan to address how the Office of Information and Technology will manage resources; however, it had not yet established the boards that are to provide governance over the centralized structure. In addition, although the department had identified the responsibilities for managing its workforce within its

new structure, it had not yet established a knowledge and skills inventory to help determine the proper roles for all employees in the new organization.

VA had neither addressed nor planned to address the last critical success factor: dedicating an implementation team to manage change. Although it had highlighted the importance of managing change in its realignment documentation, VA did not plan to establish a realignment implementation team. As we have pointed out,[16] a dedicated implementation team that is responsible for the day-to-day management of a major change initiative is critical to ensure that the project receives the focused, full-time attention needed to be sustained and successful. Specifically, the implementation team is important to ensuring that various change initiatives are implemented in a coherent and integrated way. The team must have the necessary authority and resources to set priorities, make timely decisions, and move quickly to implement the transformation. In addition, the implementation team can assist in tracking implementation goals for a change initiative and identifying performance shortfalls or schedule slippages. It is important for the team to use performance metrics to provide a succinct and concrete statement of expected performance versus actual performance. Because of its close involvement with the change initiative, the implementation team can also suggest corrections to remedy any problems.

The department had not addressed this critical success factor: it had not dedicated an implementation team to manage the realignment effort and track its progress. At the conclusion of our review in June 2007, staff from the IT realignment office, which was responsible for overseeing the realignment, had been reassigned to other areas of responsibility within the department's new structure. In addition, the Director of the Realignment Office told us that multiple offices would assume responsibility for managing the realignment through July 2008: the Office of Quality and Performance Management would oversee process implementation across the Office of

[16]GAO, *Results-Oriented Cultures: Implementation Steps to Assist Mergers and Organizational Transformations*, GAO-03-669 (Washington, D.C.: July 2, 2003).

Information and Technology, and the Office of Oversight and Compliance Management would assess whether the department is complying with the new processes. However, there was no one group responsible for managing the realignment in its entirety. Without such a dedicated group, it is less likely that VA will be able to ensure that the realignment is managed effectively throughout its implementation.

With regard to the new IT management processes, the department had begun to take action, but it had not made significant progress at the time of our report. The department had planned to begin implementing 9 of the 36 new processes in March 2007. However, the department had missed key implementation dates for these processes. As of May 2007, it had begun pilot testing two of the new processes: the risk management process and the solution (that is, business application) test and acceptance process.

Thus, although the department had taken positive steps in moving to centralized IT management, it had much more work to complete before the realignment can be considered finished and a success. If VA does not continue to address the critical success factors we identified and develop and implement the new management processes by their target date, the department may continue to operate in a decentralized manner and risk not fully realizing the long-term benefits of the realignment.

Accordingly, we recommended that the department dedicate an implementation team responsible for change management throughout the transformation and that it develop detailed IT governance process descriptions that identify how IT resources will be managed in the centralized organization. We also made seven additional recommendations aimed at ensuring that the realignment is successfully accomplished. The department generally concurred with our recommendations and stated that it has taken action or has actions under way to address each of our recommendations.

Improved Processes Planned under the Realignment Are Not Yet in Place for IT Programs and Initiatives

Although IT management has been centralized under the CIO, at the time of our review, IT programs and initiatives continued to be managed under previously established processes. The key processes to be used as the foundation for the realignment had not yet had an impact on IT programs (specifically, security and inventory management) or initiatives (such as VBA's modernization efforts and VHA's initiatives on sharing medical data with DOD).

Sustained Management Commitment and Oversight Are Vital to Resolving Long-Standing Security Weaknesses

As mandated by the Federal Information Security Management Act (FISMA) of 2002,[17] every agency is to establish an information security program. In addition, security management is a key management process that under the realignment is to be established uniformly across the department. VA's IT systems contain sensitive information that is vulnerable to inadvertent or deliberate misuse, loss, or improper disclosure.

This vulnerability was highlighted by an incident in May 2006, when VA announced that computer equipment containing personally identifiable information[18] on approximately 26.5 million veterans and active duty members of the military was stolen from the home of a VA employee. Until the equipment was recovered, veterans did not know whether their information was likely to be misused.

[17]FISMA, Title III, E-Government Act of 2002, Pub. L. No. 107-347 (Dec. 17, 2002). Further, the Veterans Benefits, Health Care, and Information Technology Act of 2006, Pub. L. No. 109-461 (Dec. 22, 2006) contains specific requirements for VA's information security program.

[18]"Personally identifiable information" refers to any information about an individual maintained by an agency, including any information that can be used to distinguish or trace an individual's identity, such as his or her name, Social Security number, date and place of birth, mother's maiden name, biometric records, etc., or any other personal information that is linked or linkable to an individual.

In a September 2007 report, we state that although VA has made progress in addressing security weaknesses, it has not yet fully implemented key recommendations to strengthen its information security practices.[19] It has implemented 2 of our 4 previous recommendations and only 2 of the 22 recommendations made by the department's inspector general (IG). Among those recommendations not implemented are our recommendation that it complete a comprehensive security management program and an IG recommendation to strengthen critical infrastructure planning to ensure that information security requirements are addressed. Because these recommendations have not yet been implemented, the department will be at increased risk that personal information of veterans and other individuals, such as medical providers, may be exposed to data tampering, fraud, and inappropriate disclosure.

Our report describes several major initiatives that VA has begun or continued since the May 2006 security incident, in efforts to strengthen information security practices and secure personal information within the department. Among these initiatives are the department's efforts to reorganize its management structure to provide better oversight and fiscal discipline over its IT systems.[20]

Establishing an effective IT management structure is the starting point for coordinating and communicating the continuous cycle of information security activities necessary to address current risks on an ongoing basis while providing guidance and oversight for the security of the entity as a whole. Under FISMA and the Veterans Benefits, Health Care, and Information Technology Act of 2006, the CIO ensures compliance with requirements of these laws and designates a chief information security officer (CISO) to assist in carrying out his responsibilities. One mechanism organizations can adopt to achieve effective coordination and communication is to

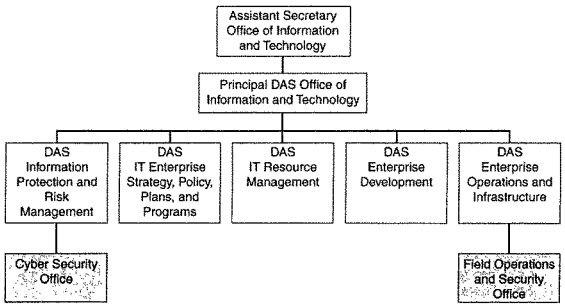
[19]GAO, *Information Security: Sustained Management Commitment and Oversight Are Vital to Resolving Long-standing Weaknesses at the Department of Veterans Affairs*, GAO-07-1019 (Washington, D.C.: Sept. 7, 2007).

[20]Other initiatives are developing a remedial action plan; establishing an information protection program; improving incident management capability; and establishing an office responsible for oversight and compliance of IT within the department.

establish a central security management office or group to coordinate departmentwide security-related activities.[21] To ensure that information security activities are effective across an organization, the management structure should also include clearly defined roles and responsibilities for all security staff and coordination of responsibilities among individual staff.

Under the realignment, the management structure for information security has changed, but improved security management processes have not yet been completely developed and implemented. In particular, under the new structure, responsibility for information security functions within the department is divided between two organizations (see fig. 2), but no documented process yet exists for the two responsible offices to coordinate with each other in managing and implementing the departmentwide security program.

Figure 2: Security Functions in New Office of Information and Technology Structure



Source VA.

Note: DAS = Deputy Assistant Secretary.

[21]This is one of the identified activities described in our 1998 study of security management practices: GAO, *Executive Guide: Information Security Management—Learning from Leading Organizations*, GAO/AIMD-98-68 (Washington, D.C.: May 1998).

Under the new organization, the Director of the Cyber Security Office (who is also the department's designated CISO)[22] has responsibility for developing and maintaining a departmentwide security program, among other things. However, the Director of the Field Operations and Security Office is responsible for implementing the program. Although VA officials indicated that these officials are communicating about the department's implementation of security policies and procedures, this communication is not defined as a role or responsibility for either position in the new management organization book, nor is there a documented process in place to coordinate the management and implementation of the security program. Both of these activities are key security management practices. Without a documented process, policies or procedures could be inconsistently implemented throughout the department, which could prevent the CISO from effectively ensuring departmentwide compliance with FISMA. In addition, without a defined process and responsibilities, VA will have limited assurance that the management and implementation of security policies and procedures are effectively coordinated and communicated. Developing and documenting these policies and procedures are essential for achieving an improved and effective security management process under the new centralized management model.

Accordingly, among the actions we recommended to the department was to document clearly defined coordination responsibilities for the Director of Field Operations and Security and the Director of Cyber Security, as well as to develop and implement a process for these officials to coordinate on the implementation of IT security policies and procedures throughout the department. We also made 15 other recommendations to improve the department's ability to protect its information and systems, including the development of various processes and procedures to ensure that tasks in the department's security action plans have time frames for implementation. VA generally agreed with our recommendations

[22]The CISO position is currently unfilled, having been vacant since June 2006. Currently, the CIO is the acting CISO of the department. The department has been attempting to fill the position of the CISO since October 2006.

and stated that it had already implemented some of the recommendations and had actions under way to address the others.

Inadequate Controls over IT Equipment at Selected VA Locations Pose Continuing Risk of Theft, Loss, and Misappropriation

In light of reported weaknesses in VA inventory controls and reported thefts of laptop computers and data breaches, the adequacy of such controls has been an ongoing concern. In July 2007, we reported and testified on an assessment of the risk of theft, loss, or misappropriation of IT equipment at selected VA medical centers.[23] Our assessment found that a weak overall control environment for IT equipment at the four locations we audited posed a significant security vulnerability to the nation's veterans with regard to sensitive data maintained on this equipment. According to our *Standards for Internal Control in the Federal Government*, agencies are required to establish physical controls to safeguard vulnerable assets, such as IT equipment, which might be vulnerable to risk of loss; in addition, federal records management law requires federal agencies to record essential transactions. However, we reported in July that current VA property management policy does not provide guidance for creating records of inventory transactions as changes occur. Also, policies requiring annual inventories of sensitive items (such as IT equipment), adequate physical security, and immediate reporting of lost and missing items had not been enforced.

Our statistical tests of physical inventory controls at the four locations identified a total of 123 missing IT equipment items, including 53 computers that could have stored sensitive data. The lack of user-level accountability and inaccurate records on status, location, and item descriptions make it difficult to determine the extent to which actual theft, loss, or misappropriation may have occurred without detection. Table 2 summarizes the results of our statistical tests at each location.

[23]GAO, *Veterans Affairs: Inadequate Controls over IT Equipment at Selected VA Locations Pose Continuing Risk of Theft, Loss, and Misappropriation*, GAO-07-505 (Washington, D.C.: July 16, 2007) and *Veterans Affairs: Lack of Accountability and Control Weaknesses over IT Equipment at Selected VA Locations*, GAO-07-1100T (Washington, D.C.: July 24, 2007).

Table 2: Current IT Inventory Control Failures at Four Test Locations

Control failures	Washington, D.C., medical center	Indianapolis, medical center	San Diego, medical center	VA HQ offices
Missing items	28%	6%	10%	11%
Incorrect user organization	80%	69%	70%	11%
Incorrect location	57%	23%	53%	44%
Recordkeeping errors	5%	0%	5%	3%

Source: GAO analysis.

Note: Each of these estimates has a margin of error, based on a two-sided, 95 percent confidence interval, of ±10 percent or less.

We also found that the four VA locations had reported over 2,400 missing IT equipment items, valued at about $6.4 million, identified during physical inventories performed in fiscal years 2005 and 2006. Missing items were often not reported for several months and, in some cases, several years. It is very difficult to investigate these losses because information on specific events and circumstances at the time of the losses is not known. Further, our limited tests of computer hard drives in the excess property disposal process found hard drives at two of the four case study locations that contained personal information, including veterans' names and Social Security numbers. Our tests did not find any remaining data after sanitization procedures were performed.[24] However, weaknesses in physical security at IT storage locations and delays in completing the data sanitization process heighten the risk of data breach.

Although VA had taken some actions to improve controls over IT equipment (such as issuing several new policies to establish guidance and controls for IT security) and had reorganized and centralized the IT function within the department under the CIO, we reported that these actions had not yet been fully implemented. The new CIO organization had no formal responsibility for medical

[24]Sanitization is the process of removing all information from computer media. VA information resource management (IRM) personnel and contractors follow National Institute of Standards and Technology (NIST) Special Publication 800-88 guidelines, as well as more stringent Department of Defense (DOD) policy in DOD 5220.22-M, *National Industrial Security Program Operating Manual*, ch. 8, § 8-301, which requires performing three separate erasures for media sanitization.

equipment that stored or processed patient data and did not address roles or necessary coordination between information resource management and property management personnel with regard to inventory control of IT equipment. The Assistant Secretary for Information and Technology, who serves as the CIO, told us that the new CIO organization structure will include a unit that will have responsibility for IT equipment asset management once it becomes operational. However, at the time of our report, this unit had not yet been funded or staffed. To ensure accountability and safeguarding of sensitive IT equipment, effective implementation will be key to the success of the department's IT policy and organizational changes.

We made 12 recommendations for actions to be taken by the department to help minimize the risk of loss, theft, and misappropriation of government IT equipment used in VA operations. The recommendations included establishing policies and procedures that require, among other things, recording inventory transactions and establishing specific, individual user-level accountability. VA management generally agreed with our findings and concurred with all 12 recommendations, noting that it had actions planned or under way to address them.

Challenges Persist for Efforts to Migrate from the Aging Benefits Delivery Network

To administer various benefits programs, VBA relies on an aging system, the Benefits Delivery Network (BDN). The BDN, which has been in operation for more than 40 years, is based on antiquated software programs, which have become increasingly difficult and costly to maintain. VBA is in the process of replacing the BDN with a faster, more flexible, and higher capacity system.

Replacing the BDN has been a focus of systems development efforts at VBA since 1986.[25] VBA currently depends on the BDN to administer programs for three types of benefits: (1) compensation and pension, (2) education, and (3) vocational rehabilitation and

[25]The BDN currently runs on aging software: COBOL programs and a nonrelational database. Analysts have indicated that moving from a nonrelational database of the BDN type to a more modern relational database is a challenging task.

employment (VRE) services.[26] Originally, the administration planned to modernize the entire system, but after experiencing numerous false starts and spending approximately $300 million on the overall modernization of the BDN, VBA revised its strategy in 1996. First, it narrowed its focus to replacing only those functionalities that support the compensation and pension program, and began developing a replacement system, which it generally refers to as the Veterans Service Network (VETSNET).[27] Then, in December 1999, it began an initiative, The Education Expert System (TEES), to move its education claims processing systems from the BDN to new technology platforms and a new architecture, as a way to improve its education benefits delivery services. (We have not evaluated the VRE program or possible plans to migrate VRE operations from the BDN.)

Progress Made in Long-Term Effort to Replace Benefits Payment System, but Challenges Persist

When VBA began the VETSNET project in 1996, it planned to complete the replacement system in May 1998 at an estimated cost of $8 million. However, over the years, VBA encountered numerous problems in completing the replacement system. We have reported on this topic several times, making numerous recommendations.[28] Although VA concurred with our recommendations and took several actions to address them, its actions were not sufficient to implement all our recommendations or establish the program on a solid footing: certain basic requirements of sound project management, such as an

[26]VBA also provides loan guaranty and life insurance benefits for veterans and their families, but these programs do not depend on the BDN.

[27]It also refers to the initiative as the compensation and pension or C&P replacement system.

[28]GAO, *Software Capability Evaluation: VA's Software Development Process Is Immature,* GAO/AIMD-96-90 (Washington, D.C.: June 19, 1996); *Veterans Benefits Modernization: VBA Has Begun to Address Software Development Weaknesses But Work Remains,* GAO/AIMD-97-154 (Washington, D.C.: Sept.15, 1997); *VA Information Technology: Progress Continues Although Vulnerabilities Remain,* GAO/T-AIMD-00-321 (Washington, D.C.: Sept. 21, 2000); *VA Information Technology: Important Initiatives Begun, Yet Serious Vulnerabilities Persist,* GAO-01-550T (Washington, D.C.: Apr. 4, 2001); *VA Information Technology: Management Making Important Progress in Addressing Key Challenges,* GAO-02-1054T (Washington, D. C.: Sept. 26, 2002); and *Information Technology: VA and DOD Face Challenges in Completing Key Efforts,* GAO-06-905T (Washington, D.C.: June 22, 2006).

integrated project plan for the replacement system, continued to be lacking.

In 2005, because of concerns about continuing problems with the replacement project, VA contracted for an independent assessment of the department's options for the project, including whether the project should be terminated. This assessment, conducted by the Carnegie Mellon Software Engineering Institute (SEI), concluded that the replacement project faced many risks arising from management and organizational issues, but no technical barriers that could not be overcome.[29] According to SEI, a new system was still needed, and VBA would not be able to successfully deliver a full, workable solution unless it addressed its management and organizational weaknesses. SEI recommended that VBA continue to work on the project at a reduced pace, while taking an aggressive approach to addressing the identified weaknesses.

We reported in April 2007[30] that VBA was generally following the course of action recommended by SEI: it was continuing to work on the replacement initiative at a slower pace, while taking action to address identified weaknesses in overall management and software development processes. For example, VBA established a new governance structure, and it took steps to improve its software development processes, such as establishing risk and requirements management processes. However, some processes had not been addressed, such as capacity planning and management, which will be important for ensuring that further development does not lead to processing slowdowns. Further, VBA had not yet documented policies and procedures to institutionalize all the process improvements that it made on the replacement initiative, having first concentrated its efforts on establishing the governance and building the organization. If VBA does not institutionalize these

[29]Kathryn Ambrose, William Novak, Steve Palmquist, Ray Williams, and Carol Woody, Report *of the Independent Technical Assessment on the Department of Veterans Affairs VETSNET Program* (Carnegie Mellon Software Engineering Institute, September 2005).

[30]GAO, *Veterans Benefits Administration: Progress Made in Long-Term Effort to Replace Benefits Payment System, but Challenges Persist*, GAO-07-614 (Washington, D.C.: Apr. 27, 2007).

improvements, it increases the risk that they may not be maintained through the life of the project or be available for application to other development initiatives.

As of April 2007, VBA had developed critical functionalities needed to process and pay certain original compensation claims using the replacement system. According to VBA officials, all five of the major software applications that make up the new system were being used in VA's regional offices to establish and process new compensation claims for veterans. In April 2007, the replacement system was providing monthly compensation payments to almost 50,000 veterans (out of about 3 million veterans who receive such payments). Nonetheless, the system requires further development, and VBA still faces the substantial task of converting records for the approximately 3.5 million beneficiaries on the BDN to the replacement system.

Under the realignment, the responsibility for all system development projects has moved from VBA to the central CIO organization: specifically, the Deputy Assistant Secretary for Enterprise Development. Thus, this official is now responsible for completing the development and implementation of VETSNET. Accordingly, we recommended that the CIO document and incorporate the improved processes for managing risks, requirements, and defects into specific policy and guidance for the replacement initiative and for future use throughout VBA. VA concurred with our recommendation and stated that the VETSNET project management processes will be incorporated into a set of standard project management policies, processes, and procedures for all IT projects in VA. Further, the CIO has identified the VETSNET governance model as the model for all VA enterprisewide IT projects, and it is being implemented in other VA priority IT development programs.

In addition, we made five other recommendations aimed at sustaining the improved management and software development processes currently being used by VETSNET project management, including processes for capacity planning and management. The Secretary also agreed with these recommendations and described actions planned in response.

Improved Planning Needed to Guide Development and Implementation of Education Benefits System

The Education Expert System (or TEES) effort aims to replace the existing education benefits systems on the BDN with a new rules-based system that will add more automated capabilities, eliminate most human intervention, and enable faster and more accurate processing of education claims. When it began the initiative, VBA had planned to complete the new system by September 2005; however, in 2004, the department refocused and rebaselined the system's development effort. VA currently estimates that the TEES initiative will be completed by 2011.

When we reported on this matter in July 2007, VBA had enhanced education benefits claims processing by developing certain functionalities to allow information to be captured in an electronic format.[31] For example, it had developed automated systems that allow (1) education institutions to provide online enrollment certifications, (2) students to provide online and telephonic verification of enrollment, and (3) the public to inquire about approved academic programs, licensing and certification programs, and national exams. However, although VBA had identified other initiatives as necessary to complete the new system and eliminate most human intervention, it had not taken action on these initiatives, which included moving the processing and payment functionality used for many education claims from the BDN to new technology.

Contributing to our concerns was that VBA did not have an integrated project plan for the TEES initiative. According to agency officials, the plan that had been developed in 2001 has not been updated since 2004, when program goals were modified. Because VBA did not have an integrated project management plan, it lacked critical elements needed to effectively guide the initiative to completion (such as a full description of the scope of the system development efforts) and an overall approach for coordinating its various education claims initiatives (such as the BDN code

[31]GAO, *Veterans Affairs: Improved Planning Needed to Guide Development and Implementation of Education Benefits System*, GAO-07-1045 (Washington, D.C.: July 31, 2007).

conversion effort). Without these critical elements, the department would be at risk of wasting millions of dollars on education claims processing initiatives that may overlap or be duplicative.

One reason for this management weakness is the lack of well-defined IT management processes across VA, which is to be addressed by the realignment. Under the realignment, the responsibility for TEES, like other system development projects, has moved from VBA to the Deputy Assistant Secretary for Enterprise Development, who is part of the central CIO organization. At the time of our report, the TEES project had not yet been affected by VA's stated intention of incorporating the VETSNET project management processes into a set of standard project management policies, processes, and procedures for all IT projects in the department. Establishing improved IT management processes is vital to ensuring effective project management and thus the future development and implementation of TEES.

To ensure the successful implementation of TEES, we made three recommendations aimed at ensuring that a comprehensive, integrated project plan to coordinate and manage the initiative would be developed. VA concurred with our recommendations and described actions planned to address them.

VA Is Making Progress in Sharing Medical Information with DOD, but the Two Departments Are Far from Comprehensive Electronic Medical Records

For almost 10 years, VA and DOD have been engaged in multiple efforts to share electronic medical information, which is important in helping to ensure that active-duty military personnel and veterans receive high-quality health care. These include efforts focused on the long-term vision of a single "comprehensive, lifelong medical record for each service member"[32] that would allow a seamless

[32]In 1996, the Presidential Advisory Committee on Gulf War Veterans' Illnesses reported on many deficiencies in VA's and DOD's data capabilities for handling service members' health information. In November 1997, the President called for the two agencies to start developing a "comprehensive, lifelong medical record for each service member," and in 1998 issued a directive requiring VA and DOD to develop a "computer-based patient record system that will accurately and efficiently exchange information."

transition between the two departments, as well as more near-term efforts to meet immediate needs to exchange health information, including responding to current military crises.

As we testified in May 2007, VA and DOD have made progress in sharing health information, but much work remains to achieve the goal of a shared electronic medical record and seamless transition between the two departments.[33] In their long-term initiatives, each department is developing its own modern health information system to replace its legacy systems, and they are collaborating on a program to develop an interface to enable these modernized systems to share data and ultimately to have interoperable[34] electronic medical records. Unlike the legacy systems, the modernized systems are to be based on computable data: that is, the data are to be in a format that a computer application can act on, for example, to provide alerts to clinicians (of such things as drug allergies) or to plot graphs of changes in vital signs such as blood pressure. According to the departments, such computable data contribute significantly to patient safety and the usefulness of electronic medical records.

At the time of our testimony, the departments had begun to implement the first release of the interface between their modernized data repositories, and computable outpatient pharmacy and drug allergy data were being exchanged at seven VA and DOD sites. Although the data being exchanged were limited, implementing this interface is a milestone toward the long-term goal of modernized systems with interoperable electronic medical records.

While working on this long-term effort, the two departments also made progress in various near-term initiatives to exchange electronic medical information in their existing systems. The

[33]GAO, *Information Technology: VA and DOD Are Making Progress in Sharing Medical Information, but Are Far from Comprehensive Electronic Medical Records*, GAO-07-852T (Washington, D.C.: May 8, 2007).

[34]Interoperability is the ability of two or more systems or components to exchange information and to use the information that has been exchanged.

departments completed development of a system to allow the one-way transfer of health information from DOD to VA when service members leave the military. DOD has been using this system (the Federal Health Information Exchange or FHIE) to transfer information to VA since 2002. According to department officials, as of March 2007, over 184 million clinical messages on more than 3.8 million veterans had been transferred to the FHIE data repository, and VA had been given access to data for more than 681,000 separated service members and demobilized Reserve and National Guard members who had been deployed. Transfers are done in batches once a month, or weekly for veterans who have been referred to VA treatment facilities. According to a joint DOD/VA report,[35] FHIE has made a significant contribution to the delivery and continuity of care of separated service members as they transition to veteran status, as well as to the adjudication of disability claims.

In addition, two ongoing demonstration projects were successfully exchanging particular types of data at selected sites:

- The Laboratory Data Sharing Interface allows DOD and VA facilities serving the same geographic area to share laboratory resources. As of May 2007, this capability had been deployed at 9 localities to communicate orders for lab tests and their results electronically and could be deployed at others if the need is demonstrated.
- The Bidirectional Health Information Exchange allows a real-time, two-way view of health data from existing systems.[36] As of May 2007, this system provided this capability (for outpatient data) to all VA sites and 25 DOD sites and (for certain inpatient discharge summary data)[37] to all VA sites and 5 DOD sites. Expanding this interface is the foundation of the departments' interim strategy to share information among their existing systems.

[35]December 2004 VA and DOD Joint Strategic Plan.

[36]DOD's Composite Health Care System (CHCS) and VA's VistA (Veterans Health Information Systems and Technology Architecture).

[37]Specifically, inpatient discharge summary data stored in VA's VistA and DOD's Clinical Information System (CIS), a commercial health information system customized for DOD.

The two departments had also undertaken ad hoc activities to accelerate the transmission of health information on severely wounded patients from DOD to VA's four polytrauma centers. These centers care for veterans and service members with disabling injuries to more than one physical region or organ system. The ad hoc processes include manual workarounds such as scanning paper records and individually transmitting radiological images. Such processes were generally feasible only because the number of polytrauma patients was small (about 350 in all as of May 2007).

Through all these efforts, VA and DOD have achieved exchanges of health information. However, these exchanges are as yet limited, and it is not clear how they are to be integrated into an overall strategy toward achieving the departments' long-term goal of comprehensive, seamless exchange of health information. Significant work remains to be done for the departments to achieve their long-term goals, including agreeing to standards for the remaining categories of medical information, populating the data repositories with all this information, completing the development of their modernized systems, and transitioning from the legacy systems. In addition, the departments have not yet projected a completion date for the project as a whole. Consequently, it is essential for the departments to develop a comprehensive project plan to guide this effort to completion. In previous work, we have made numerous recommendations with regard to this effort, placing particular stress on the need for comprehensive planning.[38] VA and DOD have agreed with our recommendations, and have taken action to implement them. However, at the time of our May testimony, the two departments had not yet developed a comprehensive integrated project plan.

The need for such a comprehensive plan is further highlighted by the strategy announced by the two departments in January 2007: that is, to jointly develop a new inpatient medical record system.

[38]GAO, *Computer-Based Patient Records: VA and DOD Made Progress, but Much Work Remains to Fully Share Medical Information,* GAO-05-1051T (Washington, D.C.: Sept. 28, 2005) and *Information Technology: VA and DOD Face Challenges in Completing Key Efforts,* GAO-06-905T (Washington, D.C.: June 22, 2006).

The departments have indicated that by adopting a joint solution, they could realize significant cost savings and make inpatient health care data immediately accessible to both departments. Incorporating this new strategy into the departments' ongoing efforts would be greatly facilitated by a comprehensive project plan.

In summary, effectively instituting the realignment is essential to ensuring that its IT programs achieve their objectives and that VA has a solid and sustainable approach to managing its IT investments. The department continues to work on improving such programs as information security and asset control, and it currently has many significant initiatives under way, for which substantial investments have been made. Yet we continue to see management weaknesses in these programs and initiatives (many of a long-standing nature), which are the very weaknesses that VA aims to alleviate with its reorganized management structure. However, until the department provides the foundation for its new IT management structure by carrying out its plans to establish a comprehensive set of improved management processes, the impact of this vital undertaking will be diminished. Implementation of the recommendations that we have made in this area could play a significant role in resolving many of these concerns.

Mr. Chairman, this concludes my statement. I would be pleased to respond to any questions that you or other members of the committee may have at this time.

Attachment 1. Key Information Technology Management Processes to Be Addressed in VA Realignment

Key area	IT management process	Description
Enterprise management	Information technology (IT) strategy	Addressing long- and short-term objectives, business direction, and their impact on IT, the IT culture, communications, information, people, processes, technology, development, and partnerships.
	IT management	Defining a structure of relationships and processes to direct and control the IT endeavor.
	Risk management	Identifying potential events that may affect the organization and managing risk to be within acceptable levels so that reasonable assurance is provided regarding the achievement of organization objectives.
	Architecture management	Creating, maintaining, promoting, and governing the use of IT architecture models and standards across and within the change programs of an organization.
	Portfolio management	Assessing all applications, services, and IT projects that consume resources in order to understand their value to the IT organization.
	Security management	Managing the department's information security program, as mandated by the Federal Information Security Management Act (FISMA) of 2002.
	IT research and innovation	Generating ideas, evaluating and selecting ideas, developing and implementing innovations, and continuously recognizing innovators and learning from the experience.
	Project management	Planning, organizing, monitoring, and controlling all aspects of a project in a continuous process so that it achieves its objectives.
Business management	Stakeholder requirements management	Managing and prioritizing all requests for additional and new technology solutions arising from a customer's needs.
	Customer satisfaction management	Determining whether and how well customers are satisfied with the services, solutions, and offerings from the providers of IT.
	Financial management	Providing sound stewardship of the monetary resources of the organization.
	Service pricing and contract administration	Establishing a pricing mechanism for the IT organization to sell its services to internal or external customers and to administer the contracts associated with the selling of those services.
	Service marketing and sales	Enabling the IT organization to understand the marketplace it serves, to identify customers, to "market" to these customers, to generate "marketing" plans for IT services and support the "selling" of IT services to internal customers.
	Compliance management	Ensuring adherence with laws and regulations, internal policies and procedures, and stakeholder commitments.
	Asset management	Maintaining information regarding technology assets, included leased and purchased assets, licenses, and inventory.
	Workforce management	Enabling an organization to provide the optimal mix of staffing (resources and skills) needed to provide the agreed-on IT services at the agreed-on service levels.
	Service-level management	Managing service-level agreements and performing the ongoing review of service achievements to ensure that the required and cost-justifiable service quality is maintained and gradually improved.
	IT service continuity management	Ensuring that agreed-on IT services continue to support business requirements in the event of a disruption to the business.

Key area	IT management process	Description
	Supplier relationship management	Developing and exercising working relationships between the IT organization and suppliers in order to make available the external services and products that are required to support IT service commitments to customers.
	Knowledge management	Promoting an integrated approach to identifying, capturing, evaluating, categorizing, retrieving, and sharing all of an organization's information assets.
Business application management	Solution requirements	Translating provided customer (business) requirements and IT stakeholder-generated requirements/constraints into solution-specific terms, within the context of a defined solution project or program.
	Solution analysis and design	Creating a documented design from agreed-on solution requirements that describes the behavior of solution elements, the acceptance criteria, and agreed-to measurements.
	Solution build	Bringing together all the elements specified by a solution design via customization, configuration, and integration of created or acquired solution components.
	Solution test and acceptance	Validating that the solution components and integrated solutions conform to design specifications and requirements before deployment.
Infrastructure	Service execution	Addressing the delivery of operational services to IT customers by matching resources to commitments and employing the IT infrastructure to conduct IT operations.
	Data and storage management	Ensuring that all data required for providing and supporting operational service are available for use and that all data storage facilities can handle normal, expected fluctuations in data volumes and other parameters within their designed tolerances.
	Event management	Identifying and prioritizing infrastructure, service, business, and security events, and establishing the appropriate response to those events.
	Availability management	Planning, measuring, monitoring, and continuously striving to improve the availability of the IT infrastructure and supporting organization to ensure that agreed-on requirements are consistently met.
	Capacity management	Matching the capacity of the IT services and infrastructure to the current and future identified needs of the business.
	Facility management	Creating and maintaining a physical environment that houses IT resources and optimizes the capabilities and costs of that environment.
Service support	Change management	Managing the life cycle of a change request and activities that measure the effectiveness of the process as well as providing for its continued enhancement.
	Release management	Controlling the introduction of releases (that is, changes to hardware and software) into the IT production environment through a strategy that minimizes the risk associated with the changes.
	Configuration management	Identifying, controlling, maintaining, and verifying the versions of configuration items and their relationships in a logical model of the infrastructure and services.
	User contact management	Managing each user interaction with the provider of IT service throughout its life cycle.
	Incident management	Restoring a service affected by any event that is not part of the standard operation of a service that causes or could cause an interruption to or a reduction in the quality of that service.
	Problem management	Resolving problems affecting the IT service, both reactively and proactively.

Source: GAO analysis of VA documentation.

September 19, 2007

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Highlights

Highlights of GAO-07-1246T, a testimony before the Senate Committee on Veterans' Affairs

VETERANS AFFAIRS

Progress Made in Centralizing Information Technology Management, but Challenges Persist

Why GAO Did This Study

The Department of Veterans Affairs (VA) depends on information technology (IT) to effectively serve our nation's veterans, with an IT budget of about $1 billion annually. However, it has encountered numerous challenges in managing its IT programs and initiatives. To address these challenges, VA is realigning its IT organization and management to a centralized model founded on a defined set of improved management processes. Begun in October 2005, the realignment is planned to be complete by July 2008.

In this testimony, GAO discusses its recent reporting on VA's realignment effort and its management of other IT programs and initiatives, including ongoing systems development efforts and work to share electronic health information with the Department of Defense (DOD). To prepare this testimony, GAO reviewed its past work in these areas.

What GAO Recommends

In the reports covered by this testimony, GAO made recommendations aimed at improving VA's management of its IT programs and initiatives.

To view the full product, including the scope and methodology, click on GAO-07-1246T. For more information, contact Valerie Melvin at (202) 512-6304 or melvinv@gao.gov.

What GAO Found

VA has made progress in moving to a centralized management structure for IT; however, at the time of GAO's review in May 2007, the department had still to address certain critical success factors for transformation, and it had not yet institutionalized key IT management processes. VA's plans for realigning the management of its IT program include elements of several of the six factors that GAO identified as critical for the department's implementation of a centralized management structure, and it had fully addressed one factor—ensuring commitment from top leadership—having obtained the Secretary's approval of the realignment and the new IT governance structure. However, as of May 2007, the department did not plan to address one of the critical success factors: dedicating an implementation team to manage change. Having such a team is important, since the implementation of the realignment is expected to continue until July 2008. Without a dedicated team, it is less likely that the implementation will be managed effectively. In addition, although the department had begun to take action to establish improved management processes—a cornerstone of the realignment—it had not made significant progress. As of May 2007, it had begun pilot testing 2 of 36 planned new processes. Until it institutionalizes key processes throughout the department, the full benefits of the realignment may not be realized.

At the same time that it is implementing the realignment, VA is managing ongoing IT programs such as information security and inventory control, and it is continuing initiatives to develop IT systems. The department is managing these programs and initiatives using existing management processes, many of which display the long-standing weaknesses that VA aims to alleviate through its realignment. Some progress has been made: for example, the department took actions to improve controls over IT equipment, such as issuing several new policies to establish guidance and controls for information security, but because the realignment was not yet fully implemented, improved processes for inventory control had not been established. In addition, progress on the development of a modernized compensation and benefits system occurred after the project implemented improved management processes, which the department now plans to apply to all its IT projects. VA also achieved a milestone in the long-term effort to share electronic health information with DOD, having begun to exchange limited medical data with DOD (at selected sites) through an interface between the data repositories for the modern health information systems that each department is developing. To achieve their long-term vision, VA and DOD have much work still to do (such as extending the current capability throughout both departments), and the two departments have not yet projected a final completion date for the whole initiative. Further progress in VA's IT programs and initiatives could be significantly aided by the improved processes that are the cornerstone of the realignment. Until these are fully implemented, the impact of the realignment on these programs and initiatives is uncertain.

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

Now, Mr. Lucas.

STATEMENT OF STEPHEN M. LUCAS, DIRECTOR, JAMES A. HALEY; VA HOSPITAL AND CLINICS, TAMPA, FLORIDA

Mr. LUCAS. Thank you, Chairman Akaka. I am most pleased to have this opportunity to appear before this Committee as a proud and long-time employee of the Veterans Health Administration. In the interest of time, I will summarize my written testimony while discussing with you my personal knowledge and experience with the realignment of the Department of Veterans Affairs Office of Information and Technology.

I would like to state up front as a personal but also well-known observation that VistA is a system put together by clinicians for clinicians, and it works. And no one who uses it ever wants to go back to what they had, or in many cases didn't have.

In March 2006, Secretary Nicholson approved the new IT system model as the framework for VA's IT system. The new business model involved the realignment of approximately 6,000 employees. The Secretary has directed the transition to be completed by June 2008. Working together, VHA and OI&T will meet that expectation. I believe that the realignment, due to its magnitude, has created many concerns as well as anxieties in VHA's medical community.

At Tampa, we were concerned that we would lose the authority to make necessary medical decisions at the point of care and that by the transfer of our development team to OI&T, we would lose our ability to innovate. Thus far, these fears have not materialized thanks to the Secretary's commitment to VHA that we would not lose our ability to recognize and implement innovation originating from VHA's clinicians in the field.

What is working. The people have been moved and they are now concentrating on getting the job done. The new centralized structure gives us greater purchasing power through economies of scale while at the same time granting facilities the flexibility to meet local needs and unforseen emergencies. A centralized approach to data security and patient privacy can be remarkably effective with goals and policies set at the national level while continuing to provide local staff and leadership with the needed training to roll out these policies and expectations and provide the tools necessary to act.

What needs to be closely watched as we move forward? VHA and OI&T need to continue to work closely together to assure that decisionmaking capability resides at the direct point of care. Communication between our clinicians and developers needs to be robust. We must continue to engage front-line clinicians in the development of the tools they use and use their input to provide effective and safe health care. There needs to be a balance between the benefits of centralization and the ability of local facilities to make IT purchasing decisions affecting efficiency and effectiveness of local operations.

And why is all of this so critical? The needs of today's VA patients require a patient-centric approach which will allow veterans and their care providers access to seamless health records and in-

formation at any time regardless of location. And so it is important that VHA and OI&T continue to work together to, (1) replace current hospital-centric systems with a patient-centric system; (2) provide a complete medical record available everywhere at all times; (3) support interoperability with other government and private health care systems; (4) support patient decision support and interdisciplinary clinical care.

Let me conclude by saying that while the realignment is not without its challenges, I see a spirit of cooperation and a sense of shared mission that will allow us to overcome them. I am proud to say that despite all of the natural and expected distraction that occur during a major realignment, we are still serving veterans with high-quality care and I expect that to get better as we continue to improve the process and work toward improved communication and cooperation.

Mr. Chairman, this concludes my statement. I will be pleased to answer any questions that you may have. Thank you.

[The prepared statement of Mr. Lucas follows:]

PREPARED STATEMENT OF STEPHEN M. LUCAS DIRECTOR, TAMPA VAMC VETERANS HEALTH ADMINISTRATION DEPARTMENT OF VETERANS AFFAIRS

Thank you Chairman Akaka and Members of the Committee. I am pleased to have this opportunity to appear before this Committee as a proud and long time employee of the Veterans Health Administration (VHA). Today I would like to discuss my personal knowledge and experience with the realignment of the Department of Veterans Affairs (VA) Office of Information and Technology (OI&T). I wanted to first take a moment to review the reorganization process. I will then follow with some personal observations on what I think has worked, and what I think needs to be watched closely to ensure that we improve the effectiveness of the newly revised IT organization.

I would also like to state upfront as a personal observation, that VistA is a system put together by clinicians for clinicians and it works, still works, and no one who uses it, ever wants to go back to what they had, or in many cases, didn't have. We should never lose sight that VA's VistA system remains a world class system and the Industry Standard for Electronic Health Records (EHRs) by a long shot. In March, 2006, Secretary Nicholson approved a new business model as the framework for VA's IT System. This generated the initial realignment to OI&T in the neighborhood of 6,000 Operations and Maintenance personnel who were previously part of VHA, the Veterans Benefit Administration (VBA), National Cemetery Administration (NCA) and other parts of VA. On October 31, 2006, Secretary Nicholson approved the transition of the VA IT Management System for the Department of Veterans Affairs (VA) to a single IT leadership authority—the VA Chief Information Officer (VA CIO). This included the permanent assignment of all VA personnel dedicated to IT development, approximately 1,000 personnel, to the Office of the Assistant Secretary for Information Technology (AS/IT) to be completed by April 2007. The final transition and realignment, to include institution of a governance structure, clear understanding of roles and responsibilities, establishment of standardized policies and business practices, etc., was directed to be completed by the Secretary by June 2008. This transition is significant due to the large numbers of people transitioned, many new polices and business processes having to be evaluated and implemented, and new communication paths and operating procedures tried, rejected in some cases, restructured and then re-implemented. All the while, caring for our patients has remained our primary mission.

I will certainly not try to hide the fact that the realignment, due to its magnitude, has created some distractions, as well as anxieties in VHA's medical community. Specifically, at Tampa, we were concerned that we would lose the authority to make the necessary medical decisions at the point of care and that, by the transfer of our development team to OI&T, we would lose our ability to "innovate"—the very engine that created the World Class VistA system in the first place. Thus far, those fears have not proven true and more importantly, we have not lost sight of our first priority to provide the highest quality care to our veteran patients, the men and women who deserve no less given the sacrifices they have made for our Nation.

WHAT IS WORKING?

• The people have been moved and they can and are now concentrating on getting the job done. The uncertainty is over.

• The new centralized structure gives us far greater purchasing power through "economies of scale" although I would like to mention that, at the same time, facilities need the flexibility to be able to meet local needs and unforeseen emergencies as I will reiterate later.

• A centralized approach to Data Security and Patient Privacy can be remarkably effective with goals, expectations and policies set at the national level, but at the same time local staff and leadership will continue to require training in the "roll out" of these policies and expectations, as well as be provided the tools necessary to act.

WHAT NEEDS TO BE CLOSELY WATCHED AS WE MOVE FORWARD?

• As I said in my earlier testimony, while I believe that there are many good things that have occurred as a result of centralization like central procurements with inherent economies of scale, and standardization in policies and processes (provided the user contributes to policy formation)), they can not be at the expense of effective and safe health care delivery. We must continue to find the right balance.

• We also can not take away the decisionmaking capability at the direct point of care or we will have created a bureaucracy and impediment to the kind of organizational construct that in my mind has made the VHA's health care delivery the best in the world.

• We can not put a wall, however slight, between our clinicians and our developers as this would effectively stifle that very innovation that was the genesis of VistA in the first place.

• We must engage clinicians about the tools they use and to leverage effective and safe health care.

• While I understand that there are many changes that we need to make as an organization in terms of privacy, security, etc, these policies and procedures must always be accomplished with a joint assessment of the impact of that policy or directive on VA's ability to deliver safe, effective health care.

• There must be a continuing balance between the needs and priorities of infrastructure and medical system requirements as well as the ability for local facilities to make IT purchasing decisions that can improve the efficiency and effectiveness of their operations. Continued work on VA's governance process will be critical to ensure that this is the case and not the exception.

And why is all of this so critical? VA has made significant progress in the evolution of its IT systems and we must continue to foster an environment where we can continue to do so in the future. The original VA IT health care system was hospital-centric, meaning it focused primarily on establishing over 100 applications at specific care locations. The needs of VA patients require a patient-centric approach, which will allow veterans and their care providers to access seamless health records and information at any time regardless of location. And so it is important that VHA and OI&T continue to work together to ensure we have a system in the future that:

• Replaces current hospital-centric systems with patient-centric system to better support modern health care needs

• Provides a complete medical record available everywhere and at all times

• Supports interoperability with other government and private health care systems

• Supports patient decision support and interdisciplinary clinical care

• Provides an open, robust systems architecture that is cost effective and easy to maintain

• Remains available to support hospital operations 24 hours every day

Let me conclude by saying that the realignment was not without its challenges, but I see a spirit of cooperation and mutual objectives that will allow us to overcome them as we continue to remain the world's leader and benchmark for health care delivery. I am also proud to say today that, despite all of the natural and expected distraction that occur in a major realignment, we are still serving the veteran with quality care, and I only expect it to get better as we continue to improve the process and work toward better communication and cooperation.

Mr. Chairman, this concludes my statement. I will be pleased to answer any questions that you or other Members of the Committee might have.

Chairman AKAKA. Thank you very much, Mr. Lucas.

Ms. GRAVES?

STATEMENT OF KIM GRAVES, SPECIAL ASSISTANT TO THE UNDER SECRETARY FOR BENEFITS, U.S. DEPARTMENT OF VETERANS AFFAIRS

Ms. GRAVES. Thank you, Mr. Chairman. It is a privilege to be here today to talk about the current state of information technology in the Veterans Benefits Administration. My statement this morning will focus on two major topics, the impact of the reorganization of information technology management on VBA activities, and the migration of VBA's legacy IT systems to the VETSNET platform.

I am pleased to report that from VBA's perspective, the reorganization of IT took place without major disruptions. While no reorganization of this magnitude can occur without some challenges, we believe that it was a smooth transition overall.

One of the main reasons why the reorganization went smoothly for us is that VBA's IT structure was highly centralized both in applications development and in the operations of our national benefits delivery systems. We also had in place a regionalized Network Support Center structure for our field op organization with established policies and procedures governing our local IT operations.

Equally as significant, the Under Secretary for Benefits, Admiral Daniel L. Cooper, had instituted a formal IT application change control and deployment process immediately upon his appointment as Under Secretary. The changes he made were based on recommendations of the Claims Processing Task Force, which he chaired. He also established a uniform IT structure and standard application configurations that were made mandatory for use by all regional offices. These actions provided the essential framework for the transition to a fully centralized environment and served to minimize many of the problems that would otherwise have been anticipated in a reorganization of this magnitude. Similarly, because of the way VBA has executed its IT organization, the transfer process caused much less anxiety for the individuals involved and minimized disruption to our overall operations.

However, as with any reorganization, this transition has not been without some challenges for us. For example, some of our regional offices have experienced problems and delays with the delivery and installation of new equipment. Also, we face a number of challenges due to the issues such as band width to handle the volume of encrypted communications we now require. Our concerns in these areas are being addressed by the IT organization.

During this transition year, we have actively participated in the development of the Department's IT governance process. The governance structure being implemented will ensure that the administrations and staff offices have a forum for communicating their business needs and that all decisions related to our IT requirements and systems are mission focused. Already we have seen that when we have well-developed business plans that are consistent with Department-wide IT objectives, we are well supported by the new IT organization. We are also pleased with changes such as the decision to meet our new equipment needs through leases, which will allow VBA to upgrade equipment more frequently and keep up with advances in technology. We believe that we our governance and business processes mature and communication channels are more fully developed, greater improvements will result.

With respect to transitioning from legacy systems, VBA has made significant progress in the migration of our compensation and pension claims processing activities from the legacy Benefits Delivery Network, or BDN, to a modernized corporate platform. VETSNET is a suite of applications which not only provide the benefit, payment, and accounting functionalities of the legacy Benefits Delivery Network, but also provides enhanced information and workflow management across the compensation and pension claims process.

In 2005, Under Secretary Cooper he requested an independent technical assessment of the VETSNET project to identify areas of concern which were inhibiting our ability to complete the final two components of the application suite, the awards and Finance and Accounting System. These two components provide benefit award generation as well as the payment and accounting interfaces.

As a result of the assessment, the Under Secretary engaged MITRE Corporation to assist in the development and implementation of mitigation strategies. In conjunction with this effort, the Under Secretary also appointed me to serve as his Special Assistant with purview over all resources required to bring the project to fruition. At that time, aligned resources included personnel from our compensation and pension business line, our Office of Resource Management, and VBA IT personnel. Although the organizational lines have changed since the IT consolidation, this interdisciplinary effort continues today, ensuring a business-focused approach to this complex systems development project.

This approach has resulted in significant progress over the past 18 months. At the end of September 2006, a total of 2,385 veterans were receiving their monthly benefits via VETSNET. Today, more than 200,000 veterans are on the VETSNET payment rolls. During fiscal year 2006, 5 percent of VBA's rating-related claims for veterans new to the VA's compensation rolls were processed entirely through the VETSNET suite. In August 2007, the figure for veterans new to the rolls was 97 percent. More than three-quarters of a billion dollars in compensation benefits payments have been processed through the VETSNET system this fiscal year.

However, our most significant gains in migrating compensation and pension claims processing from the BDN will be with the conversion of approximately 3.5 million active payment records from BDN to VETSNET. That process is underway and will be substantially complete by June 2008. The final stages of the conversion effort will be finished by June 2009. At that time, the entirety of compensation and pension claims processing activities will be off of the legacy BDN platform.

Mr. Chairman, that concludes my statement. I will be pleased to answer any questions you may have. Thank you.

[The prepared statement of Ms. Graves follows:]

PREPARED STATEMENT OF KIM GRAVES, SPECIAL ASSISTANT TO THE UNDER SECRETARY FOR BENEFITS, VETERANS BENEFITS ADMINISTRATION, DEPARTMENT OF VETERANS AFFAIRS

Chairman Akaka and Members of the Committee, it is a privilege to be here today to talk about the current state of information technology in the Veterans Benefits Administration (VBA). My testimony will focus on two major topics: the impact of

the reorganization of information technology (IT) management on VBA activities, and the migration of VBA's legacy IT systems to the VETSNET platform.

IT REORGANIZATION

I am pleased to report that, from VBA's perspective, the reorganization of IT took place without major disruptions. While no reorganization of this magnitude can occur without some challenges, we believe that it was a smooth transition overall.

One of the main reasons why the reorganization went smoothly for us is that VBA's IT structure was already highly centralized, both in applications development and in the operations of our national benefits delivery systems. We also had in place a regionalized Network Support Center structure for our field organization, with established policies and procedures governing our local IT operations.

Equally as significant, the Under Secretary for Benefits, Admiral Daniel L. Cooper, had instituted a formal IT application change control and deployment process immediately on his appointment as Under Secretary. The changes he made were based on recommendations of the Claims Processing Task Force, which he chaired. He also established a uniform IT structure and standard application configurations that were made mandatory for use by all regional offices. These actions provided the essential framework for the transition to a fully centralized environment and served to minimize many of the problems that would otherwise have been anticipated in a reorganization of this magnitude.

Similarly, because of the way VBA had structured its IT organization, the transfer process caused much less anxiety for the individuals involved and minimized disruption to our overall operations.

However, as with any reorganization, this transition has not been without some challenges for us. For example, some of our regional offices have experienced problems and delays with the delivery and installation of new equipment. Also, we face a number of challenges due to issues such as bandwidth to handle the volume of encrypted communications we now require. Our concerns in these areas are being addressed by the IT organization.

During this transition year, we have actively participated in the development of the Department's IT governance process. The governance structure being implemented will ensure that the Administrations and Staff Offices have a forum for communicating their business needs and that all decisions related to our IT requirements and systems are mission-focused. Already we have seen that when we have well-developed business plans that are consistent with Department-wide IT objectives, we are well supported by the new IT organization. We are also most pleased with changes such as the decision to meet our new equipment needs through leases, which will allow VBA to upgrade equipment more frequently and keep up with advancements in technology. We believe that as our governance and business processes mature and communications channels are more fully developed, greater improvements will result.

MIGRATION OF LEGACY SYSTEMS

VBA has made significant progress in the migration of our Compensation and Pension claims processing activities from the legacy Benefits Delivery Network system to a modernized corporate platform. VETSNET is a suite of applications which not only provide the benefit payment and accounting functionalities of the legacy Benefits Delivery Network, but also provide enhanced information and workflow management across the compensation and pension claims process.

In 2005, Under Secretary Cooper requested an independent technical assessment of the VETSNET project to identify areas of concern which were inhibiting our ability to complete the final two components of the application suite: Awards and the Finance and Accounting System (FAS). These two components provide benefit award generation, as well as the payment and accounting interfaces.

As a result of the assessment, the Under Secretary engaged MITRE Corporation to assist in the development and implementation of mitigation strategies. In conjunction with this effort, the Under Secretary also appointed me to serve as his Special Assistant, with purview over all resources required to bring the project to fruition. At that time, the aligned resources included personnel from the Compensation and Pension business line, our Office of Resource Management, and VBA IT personnel. Although the organizational lines have changed since the IT consolidation, this interdisciplinary effort continues today, ensuring a business-focused approach to this complex systems development project.

This approach has resulted in significant progress over the past 18 months. At the end of September 2006, a total of 10,385 veterans were receiving their monthly benefit payments via VETSNET. Today, more than 200,000 veterans are on the

VETSNET payment rolls. During fiscal year 2006, 5 percent of VBA's rating-related claims for veterans new to the VA's compensation rolls were processed entirely through the VETSNET suite. In August 2007, the figure for veterans new to the rolls was 97 percent. More than three quarters of a billion dollars in compensation benefit payments have been processed through the VETSNET system this fiscal year.

However, our most significant gains in migrating compensation and pension claims processing from the Benefits Delivery Network (BDN) will be the conversion of the approximately 3.5 million active payment records from BDN to VETSNET. That process is underway and will be substantially complete by June 2008. The final stages of this conversion effort will be finished by June 2009. At that time, the entirety of compensation and pension claims processing activities will be off the legacy platform.

OTHER INITIATIVES

VBA's Vocational Rehabilitation and Employment (VR&E) Program and Education Program benefit payment applications are also resident on the legacy BDN. The C–WINRS II project (which provides enhanced support for the VR&E program) and The Education Expert System (TEES) project are both slated to transfer to the corporate platform. The award and financial components of VETSNET are central to these development efforts. By reusing these common services across the business lines, we will experience greater consistency across our business systems and improved efficiencies in application development and maintenance.

We are creating a new operating element within the VBA Headquarters structure to be the focal point for development of business requirements and to interface with the VA Office of Information and Technology. We believe this alignment will ensure that VBA business requirements are clearly documented and communicated to our IT partners, and that systems development efforts have an appropriate business focus.

To effectively use the available technology, sufficient time and attention must be devoted to documenting and communicating business requirements. As noted previously, VBA will use the knowledge gained from developing VETSNET in all future systems development efforts, as we maximize the integration of technology into the claims process.

The claims development and rating decision support components of VETSNET have been in full production mode in all of our regional offices for a number of years. Further efficiencies are being seen as we aggressively strive toward full implementation of the final components of the VETSNET system.

Other gains will be realized by working in a contemporary computing infrastructure. This allows us to readily make software modifications to support improved work processes, legislative mandates, or security enhancements. These types of changes are simply not possible in the legacy BDN. The modernized corporate infrastructure will also make it possible to further incorporate and enhance decision-support and "expert-system" applications.

We are also making strides in the use of electronic data and records in place of paper records in the claims process. We are working to integrate "paperless" processing into our data and information systems and processing procedures. We are using imaging technology to support paperless processing in all of our Education and Insurance benefit programs. We are also incorporating imaging technology and electronic records in our pension program processing.

We are now conducting a pilot program to incorporate imaging technology into disability compensation processing as well. The pilot uses claims from recently separated veterans filed through our Benefits Delivery at Discharge Program. We receive the veterans' service medical records, create images of these records, and maintain them as part of the electronic claims folders for each claim filed under this pilot program.

We believe the pilot will successfully demonstrate the feasibility of this technology in the disability compensation program for newly separated servicemembers. However, because of the magnitude of the paper records we store, the extent to which we can "paperlessly" process claims from veterans of previous periods of service has yet to be determined.

Expanded use of business-rules engines and related types of application tools offers promise for further improving our claims processing. We recently solicited and received information from a variety of vendors on tools which may have potential to assist us in more efficiently processing certain types of claims. Together with the Office of Information and Technology, we are currently evaluating this vendor infor-

mation. The Supplemental Appropriation passed by Congress earlier this year will facilitate our implementation of these types of tools to improve the claims process.

Mr. Chairman, this concludes my statement. I will be pleased to answer any questions that you or other Members of the Committee might have.

Chairman AKAKA. Thank you very much, Ms. Graves.

And now, Dr. Glaser.

STATEMENT OF JOHN P. GLASER, VICE PRESIDENT AND CHIEF INFORMATION OFFICER, PARTNERS HEALTHCARE

Mr. GLASER. Thank you, Mr. Chairman. It is an honor to be here. I thought I would point out a personal connection to the State that you serve. When I was growing up, we lived in Lahaina for 2 years and I have a very fond memories of that time.

I am going to summarize the comments that I have. You have the written material with you. I am the Chief Information Officer for Partners HealthCare. We are a group of hospitals in the Boston area, Brigham and Women's Hospital, Massachusetts General Hospital, some community hospitals, health centers, physician offices, and I am responsible for the IT function for those organizations. I have been a CIO for 20 years, and in all humbleness, have some reasonable expertise in the application of IT in the health care setting.

My comments are threefold or in three general areas. One is comments on the accomplishments of the VA health care IT program to date. The second has to deal with alignment, which we will talk about when we get there, between the IT activity and the organization overall. And the third is some challenges of integrating two very large, complex electronic health records, in this case the VA and the DOD, although there are other examples across the globe.

Let me just, on the accomplishment, I think there is no question in the health care IT industry and amongst the CIO communities across the world that the VA has one of the most successful and the most remarkable health care IT programs that we are aware of at all. I personally think, and I told this to our leadership and our board, it is the most successful, certainly in the U.S. and probably in the globe today. So I just want to make sure, not that you do or all of you do, to not forget that as we discuss a range of issues that the organization must confront, is to admire and respect the work that has been done to date and in lots of ways you can see that.

I mean, if you look across the U.S. about 15 percent of hospitals use computerized physician order entry or provider order entry, entering medications, lab tests, procedure orders into the computers. About 9 percent of the physicians in outpatient practice use electronic medical records with very advanced decision support to guide and remind, et cetera.

As you all know, the VA levels of use are well beyond into the high 80's, high 90 percent. It is just a remarkable difference between where the country is and where the VA is on the adoption by physicians and nurses of these technologies in the course of taking care of people.

And in addition to the technology, if you look at, well, does it do any good? Is the care any better? I think there have been a range

of studies that show that the care delivered by the VA, particularly in the outpatient care, is superior to that to which we would find in the same communities, and so the VA in Boston and the rest of the community in Boston. So it is not only being adopted well, but the gains in care have been remarkable.

I think at my organization, Partners HealthCare, which has some all-galaxy class organizations and has done well in IT and does well in working at care, we are not where you are. We aspire to be where the VA is, but we have not yet achieved those levels of competency, skill, and effectiveness. So again, the point being is from an outsider, for you all to hear how much respect exists and for us to preserve that in the efforts that go forward.

The second set of comments has to do with alignment. There have been a lot of studies over the decades that say when an organization is very effective in using IT, why is it very effective? What factors lead to that? In organizations that have been studied, American Airlines, Federal Express, Capital One, Merrill Lynch, a variety of organizations, and there are a bunch of—well, there are actually really a small number of factors that determine excellence at the end of the day and one that is dominant is this notion of alignment. And by alignment, there is a very specific sort of set of ideas behind it.

One is that the leadership of the organization, the leadership of Capital One or the leadership of American Airlines is able to set the direction, say given our objectives and our goals and what we want to be, this is where we need to put our IT energies. These are the resources, and we may move resources from time to time. We are watching the big implementations to make sure that they are going well. We are monitoring the issues, and frankly, we are holding ourselves and all of you accountable for those results.

So there is this good linkage and integration between the IT strategy game plan and where the organization wants to go. And it is not only at this lofty high level but it is also down in the trenches, and that is those who do the work on any given day, that they, in fact, know they are responsible for the implementations, know they are responsible for making sure the design is the right design, know that they are critical to changing workflow, and know that they, in fact, are obligated to use the tool to make their prowess and their customers' prowess as effective as it can be.

When this alignment doesn't happen, there can be a lot of sort of bad things that occur. Now, you can have an IT group that is well managed and very efficient, but if it is not aligned, it may be working on the wrong things or it may be crafting applications which are not quite what the rest of the organization had in mind. And a caution, and that is I think occurs in any organizational change, and certainly Partners went through its efforts where it merged ten IS groups in the course of this and began its own centralization efforts, is to preserve that alignment and to make sure that what does not occur as a result is that front-line doctors and nurses feel that they are in control and command and directing the system's activities.

And so there is this balance to make sure that the alignment is such that the CEOs or the leaders of the hospitals and the health centers, et cetera, know that they are accountable for IT results,

have the ability to guide the agenda, have the ability to directly deal with issues and the physician and nurses know and feel the same, and we can see the fruits of their contribution to the work that is being done here.

So that is the great caution in the efforts to achieve efficiency, which matters, and I see this in our organization, and standardization, is to balance that against the need for those physicians and nurses who do the work—I don't do any real work, they do the work—to make sure that we are meeting their needs and addressing all the challenges that they face, because frankly, at the end of the day, that is why we are here. So be cautious, and it is a challenge and a difficult one to get right, be cautious about the alignment thing.

The third thing I will comment on, the interoperability, is that getting exchange of data, and there are flashes and examples of this in the prior testimony that went on, it is very, very difficult to exchange data between organizations. There are standards that are being developed but not fully developed. There are areas where no standards exist and hence one has of course to create them. There are areas that have to do with privacy. There are areas that have to do with policies and procedures regarding use of data, so if I move it from my organization to yours, what rights do you have of changing and adding and subtracting, et cetera. The country is grappling with this. This is part of the broad HHS agenda, interoperability. Our region is grappling with this, including the VA and the DOD.

I think as we discuss progress that goes on here, we ought to be mindful of the extraordinary difficulty here, both technically, policy, procedure, privacy that exists here, and while making sure we have good game plans and accountability, et cetera, that we appreciate that this will take several years to effect and to effect well, certainly to the degree that we would like to see in broad operability. So let us appreciate the challenge that confronts those who are making these organizations happen.

So, Mr. Chairman, I am done. I thank you for the opportunity here. Again, remember how good this organization is and the work that it has done and how admired and respected it is while appreciating the desire and the need to tackle challenges such as have been mentioned before and such as mentioned in my testimony.

Thank you.

[The prepared statement of Mr. Glaser follows:]

PREPARED STATEMENT OF JOHN GLASER, PH.D., VICE-PRESIDENT AND CHIEF INFORMATION OFFICER, PARTNERS HEALTHCARE

Mr. Chairman, Senator Burr, and Members of the Committee. Thank you for inviting me to take part in this hearing on the state of information technology within the Veterans Health Administration.

My name is John Glaser. I am the Vice President and Chief Information Officer of Partners HealthCare. Partners HealthCare is an integrated system of medical care whose members include the Brigham and Women's Hospital, the Massachusetts General Hospital, community hospitals, health centers, physician practices and visiting nurses. I have been a CIO for 20 years.

I am also the Founding Chairman of the College of Healthcare Information Management Executives (CHIME); the country's premier organization for healthcare CIOs. I was recently inducted into the CIO Hall of Fame hosted by CIO magazine.

My testimony centers on three areas: the accomplishments of the VA health care information technology (IT) program, the importance of information technology

alignment within a health care organization and the difficulty of integrating two large, complex electronic health records—the VA and DOD.

ACCOMPLISHMENTS

There is no question that the world's health care CIOs and the heath care IT industry regard the Veterans Health Administration information technology program as extraordinarily successful. I personally believe that the VA program is the most accomplished program in the world.

Across the country, 15 percent of hospitals have broad physician use of Computerized Provider Order Entry (CPOE). Nine percent of physicians use advanced electronic medical records (EMR) with clinical decision support. In the VA, CPOE and EMR use are commonplace. For example:

- 85 percent of the 57 million outpatient visits and almost all of the inpatient notes are online
- 94 percent of the outpatient prescriptions—equivalent to 200 million 30-day prescriptions—as well as almost all of the inpatient prescriptions are entered directly by the prescribing clinician.

The VA has not only achieved remarkable levels of adoption of health care IT but has also leveraged those systems to make very impressive gains in care. A study published in 2004 compared care of VA and non-VA patients in 12 communities and found that the care for VA patients scored higher on care quality, chronic disease care and preventive care.

Partners HealthCare is widely regarded as very effective at applying information technology to improve care. While we have high levels of adoption of CPOE and the EMR and we have improved the care that we provide to our patients, we have not yet achieved the adoption levels or care gains being seen today at the VA across more than 150 medical centers and greater than 1,400 sites of care.

In addition to our efforts to improve today's patient care, Partners HealthCare has established highly regarded research programs designed to explore new uses of the information technology to improve health care. We routinely partner with the VA in grant applications and research studies. This relationship recognizes the track record of the VA in health care information technology and the VA's sophisticated understanding of new opportunities to improve care.

I appreciate the fact that the VA has information technology challenges. So does Partners HealthCare and every other healthcare system in the world. We also face threats of data loss, projects that are over budget and under perform and difficulty integrating complex information systems across organizational boundaries. While these challenges must be effectively addressed by the VA, I would encourage us to not forget the excellence that has, and continues to be, exhibited by the VA health information technology program and the world's admiration of that program.

ALIGNMENT OF INFORMATION TECHNOLOGY

Numerous studies of information technology investments by a wide range of organizations across many industries have all identified a factor critical to effective use of the technology—alignment of the information technology function, agenda and accountability with the needs and management of the organization.

Organizations, such as American Airlines, Federal Express, Capital One and Merrill Lynch, which have consistently demonstrated exceptional information technology use have several common characteristics:

- The leadership of the organization sets the information technology strategy and agenda. The leadership actively defines the plan, manages project resources and implementation, addresses issues and assumes accountability for results.
- The staff of the organization have been given the responsibility for the ensuring that an application meets their needs, managing specific implementations and changing related process.

Failure to achieve strong alignment can pose significant problems for the organization. Information technology projects may be well managed and the information technology group may be very efficient but, without alignment, they are at great risk that their work is not addressing the priority needs of the organization and the delivered applications do not reflect the needs of the staff who do the organization's work on a daily basis.

The excellence that characterizes the VA health care information systems was a result of exceptional alignment. The VA Health Administration leadership had direct authority over the information technology strategy, resource allocation and management of results. The physicians and nurses who deliver care to our veterans

had direct access to the analysts and programmers who created the applications. Indeed the analysts and developers viewed these providers as their true bosses.

I am concerned that recent changes in the VA information technology organization structure will damage alignment. Steps that centralize authority within the VA in a manner that reduces the direct management of information technology by those who are accountable for the delivery of medical care and are most knowledgeable about the needs of the healthcare system runs a very significant risk of undermining the progress that has been made.

These concerns acknowledge the value of a central VA information technology group in areas such as developing technology standards and providing non-healthcare specific financial systems. However, too much centralization will damage alignment and diminish the excellence of medical care.

INTEROPERABILITY OF ELECTRONIC HEALTH RECORDS

The value of interoperability of electronic health records across organizations is difficult to dispute. Such interoperability is likely to improve the safety, efficiency, timeliness and effectiveness of patient care.

The difficulty of achieving interoperability of electronic health records is difficult to dispute.

There are a large number of formidable challenges to achieving comprehensive interoperability.

While the Federal Government is making significant progress in defining standards for healthcare data, these standards are still largely in the approval process and have not become widely adopted across the industry.

There are critical aspects of healthcare data for which broadly accepted data models and standards do not exist, for example, the history and physical.

Accurate identification of patients who have different medical record numbers remains difficult and labor intensive.

Procedures and processes must be developed that provide "rules of the road" for using exchanged clinical data. What categories should be used to classify physician notes? Under what circumstances can a physician in one organization change the problem list entry of a physician in another organization? Which clinical staff from one organization can discontinue a medication given by a provider in another organization? How should institutional review board processes work when the data spans multiple organizations? How will privacy policies and procedures be enforced across organizations?

There are complex technical issues that surround the interoperability of electronic health records that span organizational boundaries. There are also complex governance, policy and procedure issues that must be addressed.

The VA and DOD have made considerable progress in achieving interoperability between their electronic health records. Outpatient medication and drug allergy data is being exchanged. Mechanisms exist for the VA systems to receive DOD health date for discharged military personnel.

Achieving the interoperability of the VA and DOD electronic health records is an important goal. And those who are charged with creating this exchange should be held accountable for delivering on their plans. Nonetheless, we should all appreciate the immense challenges that exist. And we should respect the fact achieving this goal will take several years.

CONCLUSION

We all appreciate the importance of the VA's health information technology program to the efforts to provide great medical care to our veterans. We also all appreciate that the program, as do all large information technology undertakings, faces issues.

As we collectively tackle those issues, let us not forget the true excellence of the program. And let us appreciate the importance of alignment and the significant difficulty of achieving interoperability between the electronic health records of two large providers of care.

Thank you for the opportunity to testify. I welcome the opportunity to respond to your questions.

Chairman AKAKA. Thank you very much, Doctor, for your testimony.

I have some questions for this panel. This question is for all of the panelists, and I will take your responses in the order in which you were introduced. What can VA do to maintain the entrepre-

neurial spirit that has been a hallmark of VA IT while realizing the advantages and efficiencies that come with a centralized management structure? Ms. Melvin?

Ms. MELVIN. Mr. Chairman, in our work, we emphasize and support the need for VA to balance innovation with a disciplined process for carrying out its systems development efforts. In looking at the overall realignment plan that VA is undertaking, the key that we have identified are six critical factors that we think are essential to making sure that the Department is able to implement its realignment and maintain the balance relative to being sure that it understands and is able to respond to user needs.

Within that, the Department has identified 36 critical management processes that it views as essential to being able to have an effective overall management process for information technology. A part of those processes deals with ensuring that the Department has adequate communications, enterprise-wide communications, that effectively allows it to convey information relative to the realignment, which is essential to ensuring that the culture of the organization understands what the realignment is about and supports its mission.

Secondly, within the overall process of looking at these initiatives, it is important that there be disciplined processes and that they be followed. I think in the earlier panel, there was discussion of the need to balance the requirements processes, understanding the overall needs of the users, in this case the physicians, the clinicians who have been vital to the innovation that was a part of the original system, ensuring that there are proper places, proper channels, I should say, for their ideas and innovative thoughts to be addressed, to be prioritized, and to be considered in the overall mission and organization goals for having information technology. Key to that also is a governance process that does, in fact, consider all of the levels of users, managers, and other resources that have to be considered and prioritized within the overall decisions that are made for what is best for the organization in terms of information technology.

Chairman AKAKA. Thank you very much. Mr. Lucas?

Mr. LUCAS. Mr. Chairman, I will go back to, I guess, what is working. I was talking with General Howard on the way over in the van and we talk about this, and clearly, at least in Network Aid in Florida, we get outstanding support from the OI&T staff, very responsive, and we appreciate that support.

As was mentioned in the previous panel, purchasing, centralized purchasing gives us remarkable economies of scale. And then, of course, we all know that we can do a lot better with respect to data security and privacy issues and we need to do a lot better and centralization helps us with that.

The things that are worrisome, from a strategic standpoint, it seems to me, is the Electronic Health Record. That record is the product of a marriage of developers and clinicians over time and it has produced a remarkable, remarkable product, the envy of the world. Under the realignment, we have changed that relationship, and so I worry that the EHR will not be as robust as it is now. And so that is something from the strategic standpoint we need to pay attention to.

In my testimony, I also mention the flexibility of local facilities to purchase equipment that they find they need in terms of to enhance effectiveness and efficiency. We are not there yet. The relationship between OI&T and VHA is not there yet. So, for example, the Haley Center is a very busy place and we have a lot of construction going on all of the time and we treat upwards of 3,000 patients a day. That is a lot of traffic and we felt like we needed to have some directional capability and we wanted to buy some kiosks, informational kiosks. We were prevented from doing that.

We wanted to—when patients come into a hospital, principally there are there for nursing support, and so we need to support our nurses as they are caring for our veterans and we wanted to buy a PICIS system. That is a Peri-Operative Critical Care Information System that helps nurses in documentation and reduces errors. We are unable to do that.

In addition, there is a remarkable communication device called Voicera that allows nurses instant communication amongst and between themselves on the wards. That saves steps and enhances communication between and among the nurses. We are not able to do that.

So these are not mission critical—this is not mission critical equipment, but it is important equipment, and so the flexibility is not there yet. But as General Howard pointed out in his testimony or in response to a question from Senator Burr, it is a work in progress. As I mentioned, as long as we have got good communication and we feel like we are on the same team and the most important issue is the care of our veterans, we will get there. Thank you, sir.

Chairman AKAKA. Thank you. Ms. Graves?

Ms. GRAVES. Thank you, Mr. Chairman. I would like to echo the testimony of the prior panelists. I believe that having an effective communication structure in place so that the business requirements are clearly defined, clearly understood, and that we continue to develop a very strong partnership between the business elements, the service elements of the VA organization, and the IT organization, we will ensure that we have a successful implementation of this process. Thank you.

Chairman AKAKA. Dr. Glaser?

Mr. GLASER. Mr. Chairman, I think I will give you some examples of initiatives we do in my organization. It sounds like, from the prior testimony, some of these are in place at the VA to do.

An example is all of the IT staff, or virtually all of them, actually live in the hospitals or they live in those settings in the clinics so they don't forget why they are here, and they encounter doctors and nurses in the hallways who remind them of what is working.

Second, for the majority of them, the reviews are joint reviews. In other words, I might give your performance review, but somebody from the hospital is also joining me in giving that review. So you have to take care of them and take care of me at the same time.

The third is that when we have committees who guide us in our own electronic health record efforts, et cetera, those committees are composed only of providers, physicians and nurses, and only of providers who practice. So we want to make sure that after our Com-

mittee meeting of what the five things we ought to do here are that you have to go back the following day and take care of people and understand the realities that go along with that.

Another—two more items that we do here. One is in our case, the CEOs of our hospitals, the community hospital or the person running a health center, of the IT budget, 50 percent is theirs to spend at their discretion. They are bound by certain standards and there are certain things you can't do. You can't decide to unilaterally change the payroll system or the security system. But you have, within some broad guidance, you have the discretion to spend it here or spend it there or a variety of ways. We still like to understand it and make sure you are not doing something crazy, but that is rare that that kind of thing occurs.

The last thing we do is that we have a program where if you are an employee of Partners, a physician, a nurse, or an IT person, and say, I have an innovative idea, you can apply for a small grant. We have blessed 64 such projects over the last 4 years. The general size of the grant is about $40,000. It is not a whole lot of money. They put more of their own effort into this than we can possibly pay them for and they just want the permission to go off and explore this, learn about that. We ask that you write it up. We have a symposium in which people share these ideas. Not all of them work out. Some of them didn't turn out so well. But nonetheless, we try to harvest those ideas and to broadly adopt them because there are some very clever, very smart people who are willing to work really hard on their own effort or their own weekends to go off and do that. So a small internal grant program can accomplish a phenomenal amount of innovation.

Chairman AKAKA. Thank you. Mr. Lucas, what would be the impact on your facility and your ability to furnish care to veterans if you lost access to the Electronic Health Record system for even 1 day?

Mr. LUCAS. Mr. Chairman, it would be a very long day. We would immediately go over—and we practice this because it is that important as part of our disaster preparedness plan—we would immediately go over, call a Code Z, Code Zebra. And so all of the notations in the medical record would be on paper. All of the results reporting out from all of the diagnostic areas would be on paper. Hopefully, we would still be able to print out health summaries for the clinicians at the front end with our veterans, but the health summaries are just the latest information with respect to the veteran. And that isn't particularly helpful in the specialties and subspecialties, so a large number of those appointments for our veterans would probably be canceled or delayed.

In addition, because we are on paper, it slows us down, and that means that instead of seeing upwards of 3,000 patients in any given day, we would see substantially less than that, probably less than half of that, which means that appointments would be canceled.

In addition to that, since the computers are unavailable up in the OR, certain of the procedures would probably be canceled, and that is where it really starts to inflict pain, because when you are going into a procedure, even a minor procedure, you gear up for that. I

mean, anybody does. And to have that canceled and delayed is an emotional trial.

So all of that would happen. We would then, when the system came back up, engage in putting all of that paper into the system. And, of course, some physicians' writing ability is not as good as others and so you end up with legibility issues. You end up with the potential for errors, and I won't even go into the lack of bar code med administration when the computer goes down and the possibility of med errors with that.

So, this could be a very long day. Recovery would also take considerable time, several days, I would expect, to get all of that back in, to make sure we haven't made errors and to check it out. A difficult situation, but most difficult for our veteran patients. And I guess that is what, at the end of the day, what I would like to be assured of as a medical center director, as a veteran, is that the leadership of OI&T has a situational awareness of the most important interface of all, that interface between the provider and our veteran patient, and that they understand the ramifications of change and also the ramifications of a loss of our IT system. Thank you, sir.

Chairman AKAKA. Thank you. Dr. Glaser, how do facilities in the private sector protect their electronic medical information systems from disruptions and what can be done to prevent such disruptions?

Mr. GLASER. Mr. Chairman, I think the actions we take are no different than the actions that you take or no different from the actions that you would take in a banking setting, a manufacturing setting, et cetera. There are steps that are taken to try to thwart malevolent efforts of viruses and trojans and other types of bad things that people try to do. There are efforts taken to make sure that software is tested so that inadvertent changes to software don't cripple the organization as a result of activities.

We are all confronting, and it was mentioned in some of the testimony earlier, the growing use of people with their own personal devices, their own Blackberries or PDAs or notebooks and connected to wireless. It becomes a lot easier to extract data or maintain separate lists and walk out with it. And I think the industry broadly is grappling with how to do this.

I think it sounds like from the testimony before that the types of work that is done, both the technologies and management practices that are broadly adopted across this industry, are well understood by the VA IT group and are making progress in adapting that. You have a complicated organization, so I don't doubt the complexity of making it happen. But I don't know that there is a set of insight that the industry has to offer that you are unaware of.

Chairman AKAKA. Yes. We have been talking about the importance of information security. Ms. Melvin, in the information security report released today, GAO refers to shortcomings in VA's programs and procedures designed to improve VA's information security. Please comment on areas where VA can improve and share your views on whether veterans can be confident that VA is doing everything possible to protect their personally identifiable information.

Ms. MELVIN. Mr. Chairman, if I could, I have one of my colleagues with me who was directly involved in the assessment of that. We did find some areas in which the Department was making progress, but also some areas in which we felt that there was a need for additional progress and additional efforts on the Department's part, and I would like to defer to him to respond to your question, if I may.

Chairman AKAKA. Will you introduce him, please?

Ms. MELVIN. Yes. This is Mr. Greg Wilshusen, Director in our Information Technology Team who is responsible for our information security work.

Chairman AKAKA. Thank you.

Mr. WILSHUSEN. Good morning, Mr. Chairman, and thank you for your question. What we have found during our review of information security practices at the Veterans Affairs is that, indeed, they have been making progress in a number of areas and improving and starting to provide the foundation, if you will, framework, for an information security program. However, there are still several areas where they need to take additional steps. I would say first and foremost, it is defining and assuring that they have the adequate policies and procedures in place to effectively assess their risk. They are taking steps, as I mentioned, to do that.

Where VA needs additional work is the actual execution or implementation of these policies and procedures. One of the things that the Federal Information Security Management Act requires is that agencies implement an agency-wide information security program that includes assessing risk; developing cost-effective policies and procedures that reduce those risks to an acceptable level; assuring that staff and agency personnel, as well as contractor personnel, are adequately trained in their security responsibilities, and to include technical training for those staff with significant security responsibilities; and then establishing a process in place to test and evaluate the effectiveness of those controls, and as weaknesses are identified, to take prompt remedial actions to correct them.

VA has set up several processes and controls to help implement those requirements. However, there are still, as I mentioned, several areas where they need to go further in implementing those controls.

Chairman AKAKA. Thank you very much for that. Let me ask Mr. Lucas and Ms. Graves to please share any thoughts you have on shortcomings of the information security initiatives and what can be done to regain the confidence of veterans in VA's information security programs. Mr. Lucas?

Mr. LUCAS. We are in the process, as was mentioned, as I think General Howard mentioned, we are in the process of changing a culture here and so locally at Tampa, we have trained our over 3,700 employees in both security and privacy issues. We have trained over 700 of our volunteers and over 625, if memory serves me, of our students, stressing the importance of security, of data security. We are going to continue to do that.

Last year, we had 108 reports of security incidents, data security incidents. I am happy to be getting those reports. I think General Howard mentioned he is happy to be getting those reports and we

acted on them very quickly. Some of them, it turned out, were not valid. But we have got a full frontal assault on this notion of data security and we are going to continue to work through it until, as Secretary Nicholson said, we are the gold standard.

Chairman AKAKA. Ms. Graves?

Ms. GRAVES. Thank you. Echoing what Mr. Lucas said, education and training of our employees is a critical first step. VBA has implemented data and privacy training into all of its formal training courses, beginning when the employee first comes on board with the Veterans Benefits Administration. That training and enforcement of good security and information practices continues throughout all of our formal and informal training structures.

Along with that, all of our employees are required to take annual privacy and security training and to annually recertify that they understand their requirements and their responsibilities in protecting veteran data. Again, changing the culture does take some time, but I believe with the guidance from OI&T and putting the policies and procedures in place so that everyone understands their roles and responsibilities, we will achieve the gold standard that Secretary Nicholson is looking for. Thank you.

Chairman AKAKA. Thank you. Ms. Melvin, for almost a decade, VA and DOD have been attempting to develop an Electronic Health Record that can be used by both Departments. How big of an obstacle to the success of achieving interoperability is the fact that both Departments are still in the process of completing the development of their own modernized health information system? Can you comment on that?

Ms. MELVIN. I can comment on that from the standpoint of the work that we have done and looking at VA's relationship with DOD in implementing exchanges of data. What we have found, the issue of how big of an obstacle it is really is driven largely by the relationship and the interactions that those Departments have. Our biggest concern has been with the overall project management, with the lack of integrated project management, that would really establish who is in charge, what the specific goals and objectives are that they want to achieve, and how they intend to make that happen.

We have consistently seen throughout the work what we have done that both Departments have their separate modernization efforts underway. They are working and they have achieved some degrees of exchange through various short-term initiatives and ad hoc processes that they have put in place and they have also achieved some interoperability in the form of sharing computable pharmacy and drug allergy data through an interface that they put in place.

However, we still feel that even though they have made these accomplishments, VA has its modernization effort underway. The Department of Defense also has its modernization effort underway, coupled with multiple systems that it currently must rely on to exchange data. What we have not seen and what we do consider to be a concern that potentially could be an obstacle is that there hasn't been a long-term detailed plan, at least through the work that we have done thus far, that would explain or detail how the two Departments are collaborating and how they intend to ensure

that they achieve the common goal of a shared Electronic Health Record.

Chairman AKAKA. Thank you. Let me ask Dr. Glaser, do you have a comment on this issue of VA–DOD interoperability?

Mr. GLASER. I may be expressing ignorance here, Mr. Chairman. I think the idea of a common EHR that both organizations use would be an interesting idea and I would be curious about it, but that is sort of a cover for saying, you have got to be kidding me. [Laughter.]

Mr. GLASER. But maybe it is credible, I don't really know. But I would just be struck on that one.

I think even though their efforts are still in progress, both modernization and roll-out of clinical systems, one can effect a degree of data exchange while that is going on here. So one does not have to reach the pinnacle in order to be exchanging some forms of data. Paul Tibbits ran through a shades of gray, which is absolutely correct. So one can run in parallel with the modernization, the further adoption by physicians and nurses, and the exchange.

I think above and beyond, and I don't know all the details of the GAO account, it becomes a question of what people have as the priorities on any given day. Where are people spending their time and energy, because those are all huge undertakings—protecting privacy, modernization, moving the clinical agenda and exchange. So I think there is a non-trivial management challenge of balancing those demands and where you put people's time and energy on any given day.

Chairman AKAKA. Thank you. Ms. Melvin, VA has been in the process of modernizing VHA's and VBA's legacy IT systems for years. Do you believe that VA currently has program management processes in place that will allow for these initiatives to be successful, and if so, by when?

Ms. MELVIN. I will speak to your last question first. I don't know by when the Department would have its initiatives in place. What we have seen from the standpoint of the initiatives that it is undertaking, you are correct. Over time, we have had concerns relative to their project management and these are concerns that have been ongoing and longstanding. However, in the case of the Veterans Benefits Administration, what we have found is that where the Department has instituted a governance structure and taken steps to improve its project management, we have seen progress on their part in moving forward with their overall development of their new system. However, they have still got work to do. That is not to indicate that it is complete. But we do see indications that if the Department implements sound project management strategies and structure, they can be successful.

A lot of this will be driven, obviously, by the realignment that is put in place and by how successfully the Department does implement the management processes that I mentioned earlier. That will be key to ensuring that they have a disciplined approach that is grounded in sound project management and that that approach is applied throughout the organization for the IT initiatives that it undertakes.

Chairman AKAKA. Thank you. Let me further ask Mr. Lucas and Ms. Graves, what impact are these modernization efforts having on

the daily delivery of health care and benefits within VA? Mr. Lucas?

Mr. LUCAS. Any time that you can enhance the operability of your systems, it means faster information getting to the clinicians, and so we begin to see that. Beyond that, I am not—beyond that, I can't comment further, Mr. Chairman.

Chairman AKAKA. Well, Ms. Graves?

Ms. GRAVES. Thank you, sir. The project that I have the most insight into is the VETSNET project, which is the transition of our largest benefit program, the Compensation and Pension Program, from our legacy platform to a modernization infrastructure. What we have seen from our user base, our veterans' service representatives and rating veterans' services representatives who deal with our veterans on a daily basis. There is a strong pull for that technology, to continue to deliver that technology to them.

They have found that it enhances their ability to do their jobs. It reduces the rekeying of data, redundant rekeying of data that can cause errors in the claims process. They have much more ability to answer a veteran's question when he or she calls to check on the status of their claim or to see how their benefits claim is progressing. We have to move paper much less than we did before we were able to move into our more modernized environment.

We expect to see that continue to improve our processes as we are able to use the technologies available to us with image data, the types of things that Dr. Tibbits spoke of in the earlier testimony. That will help us, again, reduce the movement of paper, making sure that information that is necessary to adjudicate a veteran's claim is at the desktop of all of our users. It reduces the likelihood of a claims file being lost or misplaced and therefore unable to adjudicate the claim.

So we do see a significant pull from our users and we expect to continue to enhance our end users' ability to serve veterans as we make progress toward implementing a modernized platform.

Chairman AKAKA. Well, I want you to know that I really appreciate your responses and, of course, your testimony to begin with. You know that we are doing this to try to look for better ways of improving VA's IT system. So once again, I would like to thank all of our witnesses for joining us today.

Veterans rely upon VA's information technology programs on a daily basis for the delivery of their benefits and services. For their sake, we need to ensure that these programs are effectively managed and that they work as intended.

I want you to know that the hearing record will remain open for 3 weeks to provide time for any additional views. I thank you for being so patient.

This hearing is adjourned.

[Whereupon, at 12:07 p.m., the Committee was adjourned.]

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