

GETTING IT RIGHT: CHALLENGES WITH  
THE GO-LIVE OF ELECTRONIC  
HEALTH RECORD MODERNIZATION

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HEARING  
BEFORE THE  
SUBCOMMITTEE ON TECHNOLOGY  
MODERNIZATION  
OF THE  
COMMITTEE ON VETERANS' AFFAIRS  
U.S. HOUSE OF REPRESENTATIVES  
ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

THURSDAY, MARCH 5, 2020

**Serial No. 116-60**

Printed for the use of the Committee on Veterans' Affairs



Available via <http://govinfo.gov>

U.S. GOVERNMENT PUBLISHING OFFICE

WASHINGTON : 2023

51-636

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# GETTING IT RIGHT: CHALLENGES WITH THE GO-LIVE OF ELECTRONIC HEALTH RECORD MODERNIZATION

THURSDAY, MARCH 5, 2020

U.S. HOUSE OF REPRESENTATIVES  
SUBCOMMITTEE ON TECHNOLOGY MODERNIZATION  
COMMITTEE ON VETERANS' AFFAIRS  
*Washington, D.C.*

The subcommittee met, pursuant to notice, at 9:05 a.m., in room 210, House Visitors Center, Hon. Susie Lee [chairwoman of the subcommittee] presiding.

Present: Representatives Lee, Cunningham, Banks, and Watkins.  
Also present: Representatives Takano and McMorris Rodgers.

## OPENING STATEMENT OF SUSIE LEE, CHAIRWOMAN

Mrs. LEE. Good morning. This hearing will come to order.

Before we begin, I would like to ask for unanimous consent for members of the Washington Delegation to participate in today's hearing, should they be able to attend.

Without objection, so ordered.

Today, the subcommittee continues its oversight of the Department of Veterans Affairs' implementation of the Electronic Health Record Modernization program. Less than 4 months ago, we held a hearing on the very same topic with much of the same panel here today. The focus of that hearing on November 20th was to assess preparations for the planned March 28th, 2020 go-live in Spokane, Washington. Each of the panel members testified that she or he had the authority and the willingness to hit the pause button, if so required, which, as we will discuss today, is what happened; however, that is not the entire story.

While I have always maintained that getting it right is much more important than meeting a deadline, it is equally important that the VA remain transparent about its progress and problems.

As this subcommittee reviewed what happened between November 20th and February 10th when the Secretary told me the project was delayed, it has become clear that there were issues with the direction that the VA was headed. As early as December, facility staff who participated in testing were expressing concerns about the State of the product development. The concerns were compounded at superuser training in mid-January when staff were confronted with a system that was not what they expected in a frustrating training process. Yet, despite being briefed by the VA on January 17th, the subcommittee was not made aware of these

issues. That is hardly the transparency that we have been asking for.

I know that these concerns were communicated to the program office in real time. Further, these concerns were communicated to the VA leadership at least starting on February 4th. My question is, why was Congress left out of the loop? Did the VA think the issues identified by staff were not serious or could be solved in 2 months or less? Did the VA and Cerner not communicate about development issues? Did the VA think it is not relevant for Congress to know about conditions on the ground were not promising for a March go-live after all? I would like to have some answers to those questions.

Recently, subcommittee staff traveled to Spokane and spoke with numerous VA staff who participated in the testing and superuser training about their concerns and experience; their candor was refreshing and welcome. Clearly, they are hardworking VA staff who are committed to participate in this implementation outside of their primary responsibilities, because they do want to get it right and they want to improve the care for veterans. They get the accolades for standing up and saying it was not working. I am glad that the VA management listened to their own workforce and appropriately responded by pausing implementation.

There are several issues I want to get to the bottom of today. The overarching issue I see is a lack of communication between the VA and its staff, the VA and Cerner, the VA and external stakeholders, including veterans, and obviously with Congress. In addition, there are lingering concerns about staffing, infrastructure and readiness, which according to testimony of the Office of Inspector General remain serious issues to resolve.

There are questions about why VA did not realize earlier that its commitment to a stripped-down first capability set would be problematic. Were the right people involved in that decision in the first place? Were key stakeholders left out? What was communicated about the potential pitfalls of training on a system that did not have the functions and workflows that staff actually needed to learn? Was this a commercial practice that VA did not understand the ramifications of adopting?

This was a lesson learned from Department of Defense (DOD) that did not seem to be learned by the VA. Clearly, it was not a practice that worked for the VA staff.

VA has said that it does not want to initiate communications with veterans too early, but what is too early? Based on feedback from veterans and Veterans Service Organizations (VSOs), they need information and would like to have more of it. Outreach is just starting to happen, which in my view would have been much too late had the VA intended to go live in March. What is the plan now for external communication given the go-live is planned for July?

VA is now pushing to add new capabilities to the first set; what are the ramifications of this? The subcommittee has requested an updated time line for months, and I am again requesting it and hope to receive it soon. We also need a revised cost analysis, especially in light of the VA's budget request for Electronic Health Record Modernization (EHRM). The budget request raises many

concerns, because it is no longer based on an accurate picture of the program.

I hope that we get answers to these many questions and I am certain that I will have many more by the end of this hearing. It is my expectation moving forward that we will be getting more timely, accurate, and transparent information about the state of this program, and I hope the VA's intention is to start delivering that today.

I would now like to recognize my colleague Ranking Member Banks for 5 minutes to deliver opening remarks. Thank you.

#### **OPENING STATEMENT OF JIM BANKS, RANKING MEMBER**

Mr. BANKS. Thank you, Madam Chair.

I first want to thank our witnesses for joining us today. The presence of so many senior VA leaders reflects the gravity of the matter before us, as well as a recognition of the committee's role as a serious, constructive partner in electronic health record modernization.

I especially want to thank Dr. Fischer for joining us again from Spokane. Sir, above all else, this conversation is about your employees and the veterans that they serve.

I want to reemphasize something that I have said in previous hearings. In my opinion, this subcommittee's purpose is to bring status reports on the Electronic Health Record (EHR) modernization into public view. Since the go-live delay was announced, there have been numerous high-level conversations and briefings behind closed doors; however, the public deserves to know what is happening. Delaying the initial Spokane go-live was undoubtedly a difficult decision to make; I believe it was correct, but I am sure it came with some consideration of public relations backlash.

I laid out the facts as I saw them in our hearing in November. Configuration and design decisions for the Cerner EHR still had to be made. Dozens of systems' interfaces remained to be built. Authorities to connect to the network were still due from DOD. All of these things remain true to some extent today and they are precursors to completing testing and training. Perhaps most importantly, the Spokane employees must be able to train on something representative of the actual production system, not merely a mock-up training system.

In November, I was cautiously optimistic that a March 28th go-live was still achievable, but a rough, rushed go-live was clearly not in anyone's interest. I was relieved to learn of Secretary Wilkie's decision to take additional time rather than follow the path of least resistance, but highest risk.

It is important to be mindful of the incentives and disincentives that Congress creates for the agencies that we oversee. It seems unlikely this will be the last time during the project that VA leaders will have to weigh the right thing to do against reputational and political consequence.

I want to have a forward-looking conversation about how VA will use the additional time to prepare for a successful go-live. If several weeks represented the difference between a rough go-live and a relatively smooth go-live, I expect VA to use the additional 4 months to achieve excellence. The key issues are the quality of training on the Cerner EHR and the completeness of the system.

While I understand VA's rationale for splitting the Spokane go-live into an initial capabilities set and a final capabilities set, I think it has created a host of practical problems, and many of those problems only became clear as the March 2020 deadline approached. I am encouraged that the Department has revisited some of these decisions and opted to pull forward some capabilities into the initial go-live. However, I want to be sure that no stone has been left unturned and anything remaining in the final capabilities set is well justified.

I also hope that we can minimize the need for VA employees to navigate back and forth between VISTA and Cerner to retrieve information and provide patient care. It seems the only thing worse than a clunky EHR is two EHRs operating side by side. VA seems to have heeded our concerns about gaps in the Cerner patient portal's capabilities during the initial Spokane go-live, especially concerning prescription refills. I want to understand exactly how this problem is going to be solved.

Finally, I want to focus on our oversight responsibility to monitor resource utilization and spending. I have never been satisfied with VA's explanations of the frequent changes in the 10-year EHRM cost estimate. In the past, numbers have moved around inexplicably. Now we have a budget proposal for a \$400 million increase over the most recent Fiscal Year 2021 estimate that seems was supported only by generalities.

The most significant driver of the cost estimate is the implementation schedule and the VA has promised Congress a new schedule by March 10th. I find that timing unfortunate. Much has changed since the existing implementation wave schedule was developed nearly 3 years ago.

I am also eager to see a new schedule and, if it is credible, I will enthusiastically support it. I hope it will move joint DOD/VA health care facilities forward into earlier implementation waves. I firmly believe the James Lovell Federal Healthcare Center in North Chicago could benefit more than any other facility from a unified Cerner EHR. I had hoped to be discussing the new schedule here today, but I remain optimistic.

I look forward to exploring these issues with you all today and with our witnesses.

With that, Madam Chair, I yield back.

Ms. LEE. Thank you.

I would now like to recognize the chairman of the full committee, Mr. Takano.

#### **OPENING STATEMENT OF MARK TAKANO, CHAIRMAN, FULL COMMITTEE**

Mr. TAKANO. Thank you, Chairwoman Lee, for calling this hearing along with Ranking Member Banks, and for both of your commitment to continuing oversight of this important VA program.

The stakes are high. We are spending a lot of money on this integration; we have seen other integrations fail. I arrived to Congress in 2013 with the announcement of the failure of previous efforts and it boggled my mind that this could happen. I want to associate myself both with the concerns expressed in Ms. Lee's comments, as well as the ranking member's. We have always maintained on this



committee that getting this project right is more important than meeting an artificial deadline. That being said, we also just can not keep pushing deadlines back and watch the costs mount, because we are already projecting a huge cost.

You know, IT is one of those things, IT modernization is one of those things that policymakers, you know, struggle with in a big way. We often as lay people do not have full grasp of those details and trying to get a firm accountability for the sake of the public and the precious tax resources, this is a difficult thing. That is why we established this subcommittee, as per Dr. Roe's initial concern in the previous Congress, and I wanted to continue this oversight.

It is paramount—I will say again—it is paramount that the new EHR system work for staff and that it is safe for veterans. A month ago, I was told by Secretary Wilkie that everything was on track with the electronic health record modernization rollout, with no anticipated issues. Then just a week later we were told that the go-live was going to be postponed until July. VA has a responsibility to operate with transparency and accountability and that starts with informing this committee. I cannot emphasize that enough. We want VA to communicate with us, we want to build that trust; we also want to hold you accountable for making sure you are moving things along.

I am concerned with VA's internal communication that may have been lacking. Veterans Health Administration (VHA) and the Officer of Electronic Health Record Modernization (OEHRM) must be in continuous communication and the concerns of local facilities must be taken seriously by VA's central office. I want to know that that communication is happening internally within the VA. We also need to ensure stable leadership is in place to make this \$16 billion project a success. VA has recently—there has been recent changes at the top. The VA Deputy Secretary is the accountable official for the Electronic Health Record Modernization program under law, that is as per law, yet that position is now vacant and a successor has not been nominated, and even an acting Deputy Secretary has not been named. We need to know who is in charge and who is authorized under law to really manage this program.

I look forward from hearing from our witnesses today and moving this important program forward. I yield back, Madam Chair.

Ms. LEE. Thank you, Mr. Chairman.

I will now introduce the witnesses we have before the subcommittee today. Dr. Melissa Glynn, the Assistant Secretary for Enterprise Integration, and we have been told by Secretary Wilkie that she is responsible to him for the EHRM program. Dr. Glynn is accompanied by Dr. Richard Stone, Executive in Charge, Veterans Health Administration; Dr. Robert Fischer, Director, Mann-Grandstaff VA Medical Center; and Mr. John Windom, Executive Director of the Office of Electronic Health Record Modernization.

Also at the witness table are Mr. David Case, Deputy Inspector General, Department of Veterans Affairs, Office of Inspector General; and Mr. Travis Dalton, President of Cerner Government Services.

We will now hear the prepared statements from our panel members. Your written statement in full will be included in the hearing record without objection.

Dr. Glynn, you are now recognized for 5 minutes.

**STATEMENT OF MELISSA GLYNN**

Ms. GLYNN. Thank you. Good morning, Madam Chair Lee, Ranking Member Banks, and to your staffs. On behalf of my colleagues here with me today, we appreciate the opportunity to address you on this critical matter and, as you have noted, having a complement of leadership, because we do take this implementation extraordinarily seriously.

Before I begin, I would like to thank this committee and specifically the subcommittee for the support of this groundbreaking program. We appreciate the investment of your time and that of your staff, who visited Spokane last week to get their firsthand look of the deployment and to work with our teams out there.

We share a commitment to getting this right and, while we have revised a go-live date at the Mann-Grandstaff Medical Center, we believe we are poised for success, and that path to success factors the complexity of our system, its unique requirements, and our unprecedented collaboration with the Department of Defense.

We have made tremendous progress thus far. We completed critical infrastructure updates at the Initial Operating Capability (IOC) sites; these are already resulting in improved performance. We have successfully migrated terabytes of data. We will launch a new Joint Health Information Exchange with DOD. This will allow all legacy and modernized VA in DOD sites, as well as our private sector partners working with those departments and our departments, to share health data regardless of location. We are currently testing the new Centralized Scheduling Solution in Columbus, Ohio, which will align with the Cerner platform. We will deploy the system across the entire VA before we deploy the full EHR solution.

As Assistant Secretary for Enterprise Integration, OEI, my office supports the Secretary through leading governance to support management in execution of our major initiatives, especially focused on this program. OEI is responsible for coordinating the internal requirements of all of VA's offices to ensure the EHRM is successfully deployed.

I will say this, as my former experience, I have been an audit partner at a Big Four firm and I have sat with the responsibility to boards of directors overseeing go-lives as well. I have had that exact experience, perhaps not of this scale and the size and complexity of this program, but it is nothing new.

The subcommittee has cautioned us, as mentioned, not to rush to deploy a product that may jeopardize our ability to deliver quality care veterans deserve and we agree. We agree with your guidance and put in place a governance model which prioritizes patient safety, balances risk, enhances user adoption, and leverages lessons learned from DOD in their initial deployment.

Last month, our clinicians in the field identified and communicated critical requirements and capabilities that must be available prior to user training. This was testament to the cultural changes that we have put in place at VA that our field staff can raise concerns all the way to the top of the organization without fear. Secretary Wilkie made the decision to postpone our go-live

date so we can bring the EHR system build closer to 100 percent complete before launching the next phase, which includes the investment of thousands of hours of staff training. We have greater confidence given our new go-live date allows us to add capabilities to block one that will enhance user adoption and improve the veteran experience.

In short, we are responsibly adapting Cerner's commercial approach for EHR deployment to meet the unique needs of VA and our health care system. Our governance model worked exactly as it was supposed to by identifying those concerns and raising the issue to the top levels of the organization.

We have provided Congress with an updated time line, additional information on the project, and, as noted, the full deployment schedule will be provided next week and we look forward to walking through that with you. Our goal is to be transparent and give perspective on the milestones ahead, the scope and complexity of the task underway. I will note, serving in a similar capacity with MISSION Act chairing the Enterprise Project Management Office, we scheduled monthly briefings with staffs and look forward to a similar type of engagement strategy, so that we can have much more constant engagement on the status of the program and the activities underway.

To be clear, no other health care organization in the world is attempting something of this scale and complexity, and we share your commitment to getting this absolutely right for our veterans. Thank you for your continued support of our mission. We are happy to respond to any questions you may have this morning.

[THE PREPARED STATEMENT OF MELISSA GLYNN APPEARS IN THE APPENDIX]

Ms. LEE. Thank you, Dr. Glynn.

Mr. Case, you are now recognized for 5 minutes.

#### STATEMENT OF DAVID CASE

Mr. CASE. Thank you. Chair Lee, Ranking Member Banks, and members of the subcommittee, thank you for the opportunity to discuss the Office of Inspector General's oversight of VA's Electronic Health Record Modernization program. The Office of Inspector General (OIG) recognizes VA's commitment to this complex effort and appreciates the time VA staff have given OIG personnel as we work to help VA achieve its goals.

We have seen dedicated VA employees working so veterans can receive timely, high quality health care, and we heard their concerns. They recognize the many challenges ahead in responsibly managing risks. The OIG encourages VA to ensure its mitigation strategies are properly tested, trained for, and communicated to stakeholders. The OIG applauds VA's decision to delay deployment given the state of readiness. Patient care is put at risk when a system is rolled out with gaps in important capabilities and what we perceive as currently inadequate mitigation strategies.

Our office is conducting early, continual oversight of EHRM because of its cost and scale, and its impact on VA, millions of veterans and their caregivers. I want to discuss the findings from two upcoming OIG reports about EHR preparation at the Mann-Grandstaff VA Medical Center.

Our audit and health care teams focused on Mann-Grandstaff because the work there is critical for ensuring future successes. Both reports are in draft form and currently under review at VA, consistent with OIG practices. Our teams will integrate VA's feedback and plans for implementing our recommendations prior to publication. While we do not normally discuss not-yet-published reports, due to this hearing's timing and VA having the draft reports, I will generally describe our findings.

Our first report finds that patient care could be put at risk when the EHR is deployed, particularly given missing key capabilities. Based on DOD's transition to Cerner, Mann-Grandstaff leaders estimated a 30 percent productivity drop for 18 months after go-live, but we found the facility's related mitigation plans flawed. There appeared to be inadequate personnel to handle the transition, due in part to a 2019 hiring pause, and challenges to providing timely access to community care because of complex manual scheduling work.

By July 2019, VA found not all EHR capabilities would be ready for the March 2020 go-live. Therefore, Mann-Grandstaff would initially deploy limited functions which require mitigation. While VA just delayed the Mann-Grandstaff's go-live event to continue development, the OIG health care team found VA's mitigation strategies did not resolve significant risk to patient safety. This is the case with the lack of an online prescription refill system, veterans' most popular way to get refills.

The second upcoming OIG report finds VA's deployment schedule was unrealistic to facilitate meeting VA's goals for upgrading facility infrastructure before rollout.

In June 2019, OEHRM leaders told this subcommittee of their goal to have upgraded physical infrastructure, such as cabling and cooling systems, and IT infrastructure, such as network components and end-user devices like laptops, completed 6 months before going live. This was a key lesson learned from DOD's experience: this work should have been done before October 2019.

During their October 2019 site visit, our audit team found all 24 priority telecommunication rooms and the data centers still needed upgrades. VA confirmed last month that some contracts for critical upgrades still had not been awarded. Moreover, some end-user devices had not been received in October, let alone configured for use. This January, the team found the facility had not received about half the medical devices needed for go-live.

Infrastructure upgrades were primarily delayed for four reasons. First, VA lacked early, comprehensive site assessments to determine a realistic go-live date. They did not assess the facility's physical infrastructure needs until May 2019, about a year after setting the March 2020 go-live. Second, OEHRM and VHA had difficulty agreeing on required standards. Third, VA lacked some controls to monitor infrastructure readiness. Last, VA lacked staff to oversee the work.

In conclusion, the OIG will continue to monitor this massive effort by reviewing Puget Sound VA Health Care System's infrastructure readiness, examining VA's employees' related training, and working with the DOD OIG to review the extent to which the new

system will achieve interoperability among departments and community health care providers.

Chair Lee, this concludes my statement. I would be happy to answer any questions you or other members of the subcommittee may have.

[THE PREPARED STATEMENT OF DAVID CASE APPEARS IN THE APPENDIX]

Ms. LEE. Thank you, Mr. Case.

Mr. Dalton, you are now recognized for 5 minutes.

#### **STATEMENT OF TRAVIS DALTON**

Mr. DALTON. Thank you, Chairwoman Lee, Ranking Member Banks, and distinguished members of the committee. My name is Travis Dalton, President of Cerner Government Services. Thank you for the opportunity to be here and for your continued engagement and support of the Department of Veterans Affairs Electronic Health Record Modernization program.

Cerner is honored to be a part of a shared mission to ensure a lifetime of seamless care for our veterans, servicemembers, and their families.

Transformation at scale is hard, it carries risks, and we do not take the challenges lightly. We must deploy to over 1,700 sites, train over 300,000 VA employees, collaborate with the DOD to make decisions, and interoperate with community providers. Those challenges also represent opportunities.

Under VA's leadership, we have made significant strides on our journey to transform care. We have incorporated commercial practices, lessons learned from the DOD, and VA provider-led feedback to ensure user adoption and readiness to meet veterans' needs. We are pleased with the progress.

VA has come together to establish standardized workflows and designs based on the work of 18 clinical councils, comprised of thousands of providers across the VA, and eight national workshops. This enterprise standardization is a monumental achievement.

We launched Veterans Health Information Systems and Technology Architecture (VITAL), a training series to empower superusers with the technical and change management skills needed to support the EHR implementation and ongoing success.

We have migrated 23.5 million veterans' health records into the VA environment. This is the first time that historical VA and DOD health data are in the same system.

In the coming months, we will implement a new Joint Health Information Exchange that will allow interoperable information sharing across VA, DOD, and community providers connected to the network. Progress is being made.

We are supportive of the revised go-live schedule and the decision to take additional time for testing and end-user training. We heard the advice from this committee to take the time to get it right and listen to the provider community. The additional time will allow us the opportunity to ensure a successful go-live at Mann-Grandstaff.

This program is truly transformational. By moving from 130 disparate systems to one open, modern, integrated system, we will

have the right data at the right place and time to drive outcomes. We also have access to advanced analytics that will give us the opportunity to better diagnose, treat, and prevent chronic diseases; environmental exposures; suicide prevention and PTSD; and opioid and substance abuse.

Health care's highest calling is caring for the men and women who sacrificed in service to our country. Every day we are energized by the passion and the commitment we see in pursuit of this common purpose. On behalf of Cerner and our partners, we are humbled and proud to be a part of this effort.

Thank you and I look forward to our discussion today.

[THE PREPARED STATEMENT OF TRAVIS DALTON APPEARS IN THE APPENDIX]

Ms. LEE. Thank you, Mr. Dalton. I will now recognize myself for 5 minutes for questions.

Before I get into the questions, I am going to ask some questions looking back, but really, ultimately, the purpose of that is so we can identify issues and correct those issues moving forward.

On February 10th, Secretary Wilkie notified Congress that the VA would be delaying the planned March 28th go-live. We heard some differing reasons as to why, so I would sort of like to get to the bottom of that before we move on.

Dr. Glynn, what was the specific root cause of the delay?

Ms. GLYNN. Yes. Overall, I will just lay out a little bit of the time line and address your question as to the cause of the delay. We had a plan governance event always planned for February 10th to review the status of the integrated validation testing, the second round of that, IV-2, so that time line correspond with that testing event finishing, and always anticipated having a review—whether we were going live with the next set of activities, which really was dedicated user training.

As mentioned in my opening statement, that is thousands of hours of clinician training, front-line training that takes away from Dr. Fischer's team's time and ability to focus on their day-to-day activities. That is why we had a high priority on that time line.

The review of IV-2 results identified that we had concerns moving forward and we had an opportunity to engage, the Secretary directly engaged Dr. Fischer as part of our process. He moved forward with identifying the feedback he had hear from his staff and that was the cause for the postpone of the training, frankly, as planned in our oversight time line.

Ms. LEE. Thank you. I have heard several reasons. I head that the delay was not due to build issues and that the capabilities were 80 percent there. We have heard concerns about community care referral and beneficiary travel, and that the delay was due to a set of five capabilities that were never intended to be part of Capability Set 1, but now will be. During our budget hearing last week Dr. Stone was emphatic that the cause of delay was development, noting, quote, "There are 73 interfaces, 19 are completed as of today, and that is why we are delayed; this is development."

Dr. Stone, was the delay due to these capabilities not being included in the first capability set?

Dr. STONE. Yes.

Ms. LEE. Dr. Fischer, what is your assessment of the reasons for the delay?

Dr. FISCHER. From our perspective, ma'am, it was related to gaps in training. Our staff are involved in national/local councils, they had an expectation about what they would see in the training build, and they simply did not see it. They provided that feedback and I sent that up my chain.

Ms. LEE. I just want to make clear, like in October was when they pushed the modules out for development that would be used for the training. Then they continued to develop those modules, but the modules that were going to be used for the user training were stalled at October. When your staff was going to be trained on that, they were basically an incomplete system; is that a correct assessment?

Dr. FISCHER. That was their perception, ma'am, yes.

Ms. LEE. OK. Honestly, looking back, at that point in time is when we should have been notified that there was an issue.

Dr. FISCHER. Ma'am, I think that there were expectations in complete build and the training environment that were predicted, but we only saw the training build when it was time to train our superusers. Sometimes the expectations do not match what we thought the deliverables would be. I do not ascribe that to any particular agency or directorship, it is just the nature of this complex process.

Ms. LEE. Mr. Windom, when was the determination made what capabilities would be included in Capability Set 1 and Capability Set 2?

Mr. WINDOM. Ma'am, I think it is important to characterize what a completed build is. A completed build—and I will use a mathematical equation—equals the core EHR being delivered by Cerner, plus the interfaces—for the build one, it is 73 interfaces—plus the workarounds or alternate workflows that are needed for a clinician to perform its duties or her duties. That completed build set is an important characteristic.

As part of our testing activities, the completed build was being—the core EHR was being developed based on introductory of workflows—the interfaces, as you know, are still ongoing and being worked—and the workarounds associated with that are being developed as well. What ultimately was derived from the activities as planned at the IV-2 event was that the totality of those solution sets were needed for the end users to properly train or to establish a foundation of training for them to be comfortable that they were ready to implement.

Things revealed themselves as intended and at the IV-2 event it revealed that we needed to have closer to a completed build, which meant more interfaces being ready, which meant more clarification on workarounds being ready and, hence, we went to the Secretary with the request to delay the go-live. I think things worked, I just wanted to make that clarity for you.

Ms. LEE. No, that is fine—

Mr. WINDOM. Okay.

Ms. LEE.—but can you answer the question of what date was the determination between the capability sets made?

Mr. WINDOM. Ma'am, we had our first capability review—again, our capability set is a byproduct of what the clinicians need at Mann-Grandstaff to perform their services in support of our veterans.

Ms. LEE. Can you just answer the question—

Mr. WINDOM. Well, ma'am—

Ms. LEE.—what was the date? My time is expiring.

Mr. WINDOM. Well, there is no specific date, because it was an evolving process. It started in July 2019 and has evolved to this present point in time.

Ms. LEE. All right. I just request that you provide the subcommittee with a full list and final breakdown of what is in each of those capability sets.

Mr. WINDOM. Yes, not a problem, ma'am.

Ms. LEE. Thank you.

Mr. WINDOM. Thank you.

Ms. LEE. My time has expired. I now recognize Ranking Member Banks.

Mr. BANKS. Thank you, Madam Chair.

Dr. Glynn, you have taken over some of former Deputy Secretary Byrne's oversight and decisionmaking responsibilities for EHRM, help me understand exactly what those are. For example, leading up to the delay decision there were two rounds of integration validation testing, three other kinds of testing, and superuser training. What reports did Mr. Byrne get from these events and what decisions did he sign off on?

Ms. GLYNN. Yes, sir. As Deputy, Mr. Byrne was an important member of our leadership team, overseeing many of our initiatives; however, the Secretary has always made this program a priority since its inception, he was the one who signed the Cerner contract originally. The Secretary was and remains the chair of our governance process. Mr. Byrne was involved in that governance process while Deputy, but case in point, we reached the planned milestone last month, the Secretary made the call to postpone the training and revise go-live.

To your question specifically, we had a governance process in place, the Deputy served as a member of that team, chairing our executive steering committee, the Secretary was always the chair. We have always had briefings, program management reviews with the Secretary present and we continue to do so. In fact, we will be doing just that later this week.

Mr. BANKS. Which of those reports that I mentioned will now go to you and which decisions will you be responsible for specifically?

Ms. GLYNN. My responsibility is to help coordinate and to facilitate making decisions on behalf of the executive steering committee, moving those decisions forward for the Secretary to be able to make those decisions.

Dr. Glynn and Dr. Stone, the EHR appropriation has specified for 3 years now that, quote, "The funds provided in this account shall only be available to the Office of the Deputy Secretary to be administered by that office." What has that meant in practice? In other words, what leadership or supervision was the Deputy Secretary providing and how has it benefited this project?



Ms. GLYNN. I will start off by saying the Deputy had responsibility for review of the contract terms, the oversight of signing off on the task orders, and the obligation of funds.

Dr. STONE. I would concur with what Dr. Glynn has said. All of those decisions are now flowing to the Secretary for sign-off and that is probably the major change. Dr. Glynn's role as assuming the role of integrator, compiler, forcing function of bringing people together to make sure that we resolve problems, has now emerged more fully since the departure of the Deputy Secretary from a financial standpoint. There is also a reconciliation of who is responsible for which expense. For instance, VHA as the health care system is responsible for cabling in our buildings, for creating the heating and cooling systems; in the switch closets, Office of Information and Technology (OI&T) has responsibilities; and de-conflicting those pieces of financial responsibility are essential to the role that Dr. Glynn now assumes.

Mr. BANKS. Okay. Let us shift gears a little bit.

Mr. Dalton, the main issues that Secretary Wilkie cited when calling for the delay were the incomplete EHR build and the quality of training. What aspects of the EHR configuration and workflow remains incomplete and when will they be complete?

Mr. DALTON. Thank you, sir, for the question. I would like to just make a quick comment. You know, we are using a proven commercial practice here. The process we are using is we are doing unit system and integration testing, so we are doing levels of testing on an incremental basis. We have got some structured processes, we have gate reviews, we have checklists that we are using, and we have an ongoing, systematic evaluation of the risk. Our goal is that we have—as we go, these processes are fluid, they are never perfect, you know more now than we knew at the beginning—so our goal is to have processes and checklists and informed decision-making and a constant evaluation of risks over time, which I think is what we have seen as this process has played out.

I think that there are a couple, you know, key sets in Capability Set 2 specifically to your question, sir. Imaging is one of those, some cardiology elements, and then also some pieces related to referral management, but 90 percent-plus of the clinical capability will be in Capability Set 1 when we go live in Mann-Grandstaff, sir.

Mr. BANKS. All right. Just a quick follow up, Mr. Dalton. Are you confident that your trainers fully understood VA's specific workflows and processes, and did they shadow the VA employees beforehand to become familiar?

Mr. DALTON. If I may, just a little context. In terms of the training, I agree with Dr. Fischer's assessment. I would just like to say that I am not sure it is specifically a training issue, I think it was a content and expectation issue related to what they expected to see. We were training to workflows, which I think is important, but I am not sure all the content was there that they would have expected, and we agree with their assessment.

We are using primarily Cerner trainers, we have got some contract trainers, and I think we have got some work to do there in terms of the quality that we are bringing and also in the following of the VA workflow, sir.

Mr. BANKS. Okay, thank you. My time has expired.

Ms. LEE. Thank you.

I now recognize Mr. Watkins for 5 minutes.

Mr. WATKINS. Thank you, Madam Chair.

Mr. Dalton, as a veteran who receives care in the VA and somebody who grew up in the medical community, I have an appreciation for the challenges that you face. Will you give us a sense of the progress that has already occurred to date?

Mr. DALTON. Yes, sir. First of all, thank you for the question. I think, you know, it is easy to get focused on what is not going well and I think it is an important discussion that we are having here today, but I also appreciate your question because I do not want to forget the why and also the progress that is being made.

We are moving to a single longitudinal record for the DOD and the VA. I think you will see increased efficiency and you will see safety as well, so you will embedded rules and alerts. In many cases you have providers out there today that are having to use five systems to complete standard workflows; going forward, they will be using one system with integrated data, which is ours.

Economies of scale, so you have the opportunity to reduce operating costs over time and save taxpayer dollars. We have seen that in the commercial markets in a material way. And then innovation and advanced analytics, using the data we have been able to migrate in order to solve and work on problems related to toxic exposure, opioid abuse, and suicide prevention.

There are accomplishments along the way, sir. I mentioned that enterprise design that the VA has worked on. You know, I have worked with 24 large health systems, that is a major accomplishment bringing together your enterprise in that way to come together on standard workflows.

Then I think we talked a little bit too about improved decision-making, we see a lot of progress. We have seen a lot of coordination between DOD and VA as well in their working relationship and decisions getting made.

Then finally, if I may, sir—

Mr. WATKINS. Yes.

Mr. DALTON.—I think the interoperability issue and question is one that I would like to bring up is that we—first of all, Cerner's position is it is your data, it is the patient's data, and I want to be crystal clear on that. That we support open standards, patient rights, Office of National Coordinator for Health Information Technology (ONC) rules, and other rulemaking associated with providing that data.

The Joint DOD/VA Health Information Exchange (HIE) go-live cannot be understated how important that is. It really sets the stage for a national interoperable network of data with community providers, which is something we have talked about collectively for years and have not accomplished. We are on the precipice of accomplishing that and the VA is leading the way with that, and I really think that is an important step for the Nation in going forward, sir.

Mr. WATKINS. I understand, and understand the challenges, but it seems to me that—it does seem to me that the work that the VA has—the work accomplished has positioned the VA to be a leader

in the health care space and enhanced delivery of health care to our veterans. Would you agree?

Mr. DALTON. Yes, sir, I would.

Mr. WATKINS. All right. Mr. Windom or Mr. Dalton, how many system interfaces have been tested to any degree and how many from end to end?

Mr. WINDOM. Sir, right now, of the 73 that are identified as what are Capability Set 1, 20 we can say are done end to end, with a large group of interfaces to the tune of about 42 more being available this month, the month of March.

Mr. WATKINS. Who is the Director of Infrastructure Readiness in your office and who was performing this responsibility before that position was filled?

Mr. WINDOM. Sir, my Technology Integration Officer, Chief Technology Integration Officer, Mr. John Short, who I believe is sitting somewhere behind me, fills that void—or fills that role. In addition, he is the same one leading the joint interface elements between DOD, VA, and Cerner. I think that synergy supports our objectives.

Mr. WATKINS. Dr. Fischer, how do you expect Cerner's training to be different going forward, and what do you and your employees need to see in order to ensure confidence going into the July go-live?

Dr. FISCHER. Sir, I believe Cerner represents a very agile corporation. Based on feedback, both the National Councils and our local subject matter experts will thoroughly review the training program before it is executed, and I think that is from lessons learned recently and I am very enthusiastic that training will be of high quality next time around.

Mr. WATKINS. Mr. Case, in your testimony you laid out what is still incomplete in the Spokane Medical Center's infrastructure upgrades. Some of these statistics are dramatic, like 92 percent of the server rooms still need cable upgrades, 80 percent have poor cable management. Do your office and VA have a different definition of what infrastructure upgrades are critical versus desirable?

Mr. CASE. I do not think we do. I think, if you are looking at IT infrastructure, we basically took what they said they needed and we just counted. If you are looking at laptops and other IT infrastructure that should have been there in October, 6 months ahead of time, 30 percent were missing. There is medical devices that have to be connected to the system. When we looked at that last in February, only 50 percent were there.

When you look at the physical infrastructure, we once again adopt whatever position it is that VA is taking in terms of our scrutiny. The term is grandfathered-in 5E cables, as I recall, for the 6A cabling, and so we do not expect them to put the 6A cabling in on those where they have 5E, but they need to upgrade other rooms. When we last looked, they had taken steps to bring a lot of their telecommunications rooms into standardization, which we looked, I want to say, a week or so or 2 weeks ago.

Once again, we are trying to measure them against a standard they accepted and which comes from the DOD lessons learned, which is 6 months prior we should have a system ready and upgraded as appropriate. We understand DOD's more successful roll-

out in their recent rollout, one of the reasons for that was they strictly adhered to that 6-month standard.

Mr. WATKINS. Understood, thank you.

I am out of time, Madam Chair. I yield.

Ms. LEE. Thank you. I now recognize myself for 5 minutes.

Mr. Dalton, was the VA clear in what was required within Capability Set 1 and the go-live in Spokane? It is just a yes or no.

Mr. DALTON. Yes.

Ms. LEE. Did this time line give Cerner sufficient development time before training and go-live in Spokane?

Mr. DALTON. Following a commercial approach, yes.

Ms. LEE. Was Cerner on track to deliver all of Capability Set 1 on time for the March 28th go-live?

Mr. DALTON. From a clinical configuration, yes; from an interface perspective, I can't say definitively.

Ms. LEE. You can not say—

Mr. DALTON. I do not know. We were working it day to day—

Ms. LEE. Okay.

Mr. DALTON.—that was a big number, it was more than we thought when we started, it was—it is daily in process, ma'am.

Ms. LEE. Probably not?

Mr. DALTON. Probably not.

Ms. LEE. Yes. Dr. Stone, were there capabilities that Cerner was expected to deliver within Capability Set 1 that they failed to deliver?

Dr. STONE. The basic problem—and I know you would like a yes or no, but I am going to give a nuanced answer—the basic problem is we accepted Capability Set 1 as a minimum viable product, but expected every piece of it to be present. When we emerged from the second set of testing, we could not assure that our workarounds and mitigation strategies that were necessary—and there are in excess of 65 of them that are necessary in Capability Set 1—could be tested and trialed and, therefore, we had to concur with our clinical lead on the ground and our leadership, as well as our other communities, which included our financial community, our pharmacy community, and our community care purchasing group, who all felt they could not assess their readiness to go live because they could not see their mitigation strategies. Therefore the answer was, no, the system was not ready.

Ms. LEE. So but you—I guess my question is, you would—then the answer would be that Cerner delivered what they were expected to deliver, but just the capabilities, the workarounds, and the mitigations were—

Dr. STONE. We could not—we could not—

Ms. LEE.—too much?

Dr. STONE. Madam Chair, we could not see the processes that the users expected to see and designed in the work groups, and clearly the interfaces that allowed us to mitigate—and let me just concentrate on pharmacy, there are four key mitigation strategies that tie us into our automated pharmacy refill, which occurs 11,000 times a month at the Spokane site, none of that could be seen and validated. Therefore, the ability to pull people off of their regular job and begin intensive training, which was about 20,000 hours of needed training, did not make sense at all. Therefore, as Mr.

Windom had predicted, we would reach a February 10th decision date, when we looked at each other on that February 10th date, it was absolutely clear that we needed to carry to the Secretary a recommendation to not go live.

Ms. LEE. Okay. Mr. Dalton, how do you respond to this? Was—how do you respond to that? Was the VA clear on what it needed for the go-live in Spokane?

Mr. DALTON. I think so. I think we collectively worked on the capability sets, it was not a unilateral decision. We had a process where we had functional experts, we worked closely with the VA, we worked with the councils, we weighed in with our professional opinion.

I do not feel that anything was levied upon us, I think we collectively decided on those capability sets, ma'am.

Ms. LEE. Dr. Stone, was the VHA involved in those decisions on what was in the capability sets?

Dr. STONE. Yes. Last fall—and I can not remember the exact dates—when discussions began to occur whether the full capability set would be ready, what we now call Capability Set 2, and whether we could take a minimum viable product, we all agreed that there was huge value to an initial go-live at a lower-complexity facility like Mann-Grandstaff, and we still remain committed to that. There is huge value. There is also tremendous enthusiasm on the ground, as your staff recognized, from those clinicians and those workers and employees that are participating in this to get this live, to learn our lessons.

One of the lessons that I learned when I was in the commercial space and was assigned to the DOD fielding was we failed to really listen to those efforts and lessons learned and, therefore, we attempted to go live in DOD and then ended up with a 23-month delay in order to do the operational readiness testing that we have now demanded. I think we have an incredibly agile vendor here with huge amounts of commercial experience, but is still learning the lessons of working in government space where we look forward to the agility that they bring to us that will allow us to really test this system end to end as we would do in any other system that we would bring on board.

Ms. LEE. Dr. Glynn, so as leaders of this project—and Dr. Stone—like just give me a top line, how are you examining this and, you know, what steps are you taking to make sure—I mean, clearly, I think the big issue was you had a capability set that had a lot of mitigation steps in it, which, honestly, I am totally fine with examining the capability sets to avoid that, because, honestly, from a management point of view, once you put these mitigation steps in place, that becomes the standard. You know, you want user success and user acceptance. If you are going to have multiple training modules where you are going back and updating it, you are going to see dissatisfaction from the end users, because they are not going to want to have to go through training and then develop a step, then get rid of that step and go through another training. I am totally on board with this. I just want to know, what are you doing from a management point of view to make sure that this process does not repeat itself again?

Ms. GLYNN. Yes, ma'am. Overall, what we have put in place recognizes the complexity of all the work that is going on, as highlighted by my colleagues, and by Mr. Case and Mr. Dalton. We have—three times a week we have a joint operations center in place inside the VA, which features representation across the agency. There is over 300 individuals either participating in person or by phone, including the folks in Spokane and Seattle, and we are tracking everything from where is the status of the interfaces, are there any stops that we can overcome between our colleagues in IT and Mr. Windom's office and OEHRM, working with VHA; understanding and updating the testing, the planning for all the mitigating actions.

We found this—we stood this up to support the launch of the MISSION Act, we found it to be a very effective program, because we get everybody in the room who can hear the same thing at the same time. And, frankly, from my experience at the VA, that is one of our biggest challenges, because it is a large organization, especially when we are fielding—or sitting in D.C. and we are fielding a system in Washington State. We need to have everybody hearing the same message, being able to be heard and have their concerns heard at the same time, and tracking the progress. So that everyone understands when we say—you know, one of the terms we sort of jokingly say and ask Mr. Windom the question of were the interfaces ready, we call them done-done, because we want to make sure that everyone has the same understanding of what does complete mean.

Mr. Case highlighted, you know, concerns and findings that the Inspector General (IG) had a point in time, the program has been very dynamic. We have been tracking infrastructure readiness, the completion of the infrastructure, and all of the setups and readiness at Mann-Grandstaff, you know, for many months now, and we are very pleased to say that anything that had been found in that audit has been cleared and has been in place for some time at this point.

We are tracking, from a management perspective, there is a lot of work that goes into—these are just not three times a week we have meetings, there is a critical working group behind that with representation across VA to make sure that we are ready, tracking, and available to understand where the risks are and being able to mitigate those. That flows up to our executive steering committee, which we all sit on, and then flows up to the Secretary's program management reviews.

Ms. LEE. I think she answered the question, clearly.

I would now like to recognize Mrs. McMorris Rodgers.

Mrs. MCMORRIS RODGERS. Thank you, Madam Chair and Ranking Member and the committee, for your commitment to this project. I want to thank Dr. Fischer for traveling to represent Mann-Grandstaff. Dr. Fischer, thank you for your leadership, your advocacy for the interest of veterans in Eastern Washington. I have heard a lot of positive about your leadership and appreciate you taking on this project.

Dr. Stone, I want to thank you for appearing here today and your commitment at this critical time in the electronic health records modernization.

I want to pick up on some issues of staffing that I asked about at a previous hearing. I want to make sure that your commitment to, quote, “flood Mann-Grandstaff with resources to cushion the Cerner rollout” is being carried out.

First, how many travel nurses do you have onsite now and how many are you hoping to get?

Dr. FISCHER. Ma’am, we have 24 traveling nurses onsite, but since we have had a delay in go-live they will likely be packing up here pretty soon and we will bring them back out in June. That is the current plan and so that whole cycle will be repeated.

Mrs. MCMORRIS RODGERS. Thank you. How many physicians have you added, either from the clinical resource hub or reassigned from other medical centers, and how many do you hope to add?

Dr. FISCHER. I do not have that breakdown today, but I am happy to forward that to you. We have hired over 50 of our 108 mitigation personnel and we anticipate to be 90-percent healthy in mitigation staffing with this delay in go-live, an added benefit of slowing this train down a bit.

Mrs. MCMORRIS RODGERS. I just heard—I was going to ask about the additional permanent staff, that goal was 108 and you just said it was——

Dr. FISCHER. That is correct, ma’am.

Mrs. MCMORRIS RODGERS. You are at 50.

Dr. FISCHER. We are at 50, 54.

Mrs. MCMORRIS RODGERS. Fifty four.

Dr. FISCHER. Several have had an offer, we are just waiting to on-board them, but I am told by June by our H.R. department, we will be at about 90-percent strength by the time we go live.

Mrs. MCMORRIS RODGERS. Okay. The additional permanent staff that you need you believe will be in place by July 2020?

Dr. FISCHER. We anticipate 90 percent. Some of the physician positions are extremely difficult to recruit under any circumstances. I am optimistic, as I was the last time I sat here, but we will likely not reach 100 percent. We never really anticipated we would reach all of those recruitments, but over 90 percent, from my perspective, is healthy.

Mrs. MCMORRIS RODGERS. Okay. Given the delay of the initial rollout from March to July, are we going to be able to keep all these employees, some of whom are temporary, for when they are needed most?

Dr. FISCHER. The answer would be yes, because they are permanent hires. Our hope is that once we reach steady State we might find an excess, in which case we will allow them to attrit. In the short to medium term, as long as we need them, the permanent hires are permanent and we would attrit them when they were ready to move or if they underwent an adverse action; hopefully, that would not be the case.

Mrs. MCMORRIS RODGERS. Okay. Thank you.

Mr. Case cited in his testimony a backlog of 21,155 requests for community care at the medical center——

Dr. FISCHER. Yes, I am happy to——

Mrs. MCMORRIS RODGERS.—perhaps this does not surprise me. I understand one of Secretary Wilkie’s reasons for delaying the

Cerner go-live was that the functionality to process community care is not ready for prime time yet.

With the additional time and staff you have and will have, how are you going to walk through this backlog and make community care available to the veterans who want it?

Dr. FISCHER. Just for clarification, ma'am, the backlog is now, I think, down around 17,000. That is not to say that the care has not been rendered, we simply have not administratively closed those consults. Through a combination of overtime and compensation time, as well as leveraging those travel nurses, I am told by the end of April we will have completely resolved that backlog.

Furthermore, I have asked our Veterans Integrated Services Network (VISN) for additional personnel in order to support the Office of Community Care, so that we do not reach that crossroads again.

I would say that in the last 2 years I have increased the personnel in the Office of Community Care by 48 percent, this next bump will represent a substantial increase as well, but the reality is we are purchasing more care and it takes more staff to support that care.

Mrs. MCMORRIS RODGERS. Okay. Mr. Case, would you respond to just where you believe we are?

Mr. CASE. On various issues, I would say yes. Community care, which you described, they have been scheduling overtime to deal with the backlog. My understanding is, in the process, in reducing the backlog, they are going to train people to adapt to the new scheduling of community care. That may be more complicated, but it is also going to require—there is going to be more demand, is the anticipation of a mitigation.

Mrs. MCMORRIS RODGERS. Okay. Mr. Fischer, would you also address where we are with, you know, the issue of only having 31 percent of computers and 51 percent of new medical devices not being received yet?

Dr. FISCHER. My understanding is that all the computers have been distributed to my staff. Biomedical devices are continuing to be distributed as well. I would defer to Mr. Windom on the technical aspects of where precisely we are with biomedical devices. I have a new computer, it is in my bag, and so does every single staff member have a new and improved computer with greater RAM, so we are good to go with respect to our computers, ma'am.

Mrs. MCMORRIS RODGERS. Okay. My time has expired. I do have further questions that I will submit for the record. I appreciate all of your attention to getting this right and getting it done as soon as possible. Thanks.

Dr. FISCHER. Thank you, ma'am.

Ms. LEE. Thank you.

Dr. Glynn, on 2020 I sent a request for several documents related to this project; as of yet, we have yet to receive any of them. Can I get your assurance today that I can get those documents by next week?

Ms. GLYNN. I believe you can get them sooner than next week. I am not sure if we brought them with you, but we do have those prepared—

Ms. LEE. Oh, great.

Ms. GLYNN.—and available. So—



Ms. LEE. Thank you.

Ms. GLYNN.—I know I was working on making sure those were prepared.

Ms. LEE. Mr. Windom, what is now—what is the revised time line in terms of training, et cetera?

Mr. WINDOM. Ma'am, we look forward to delivering that to you on March 10th. I do not have it memorized, but it reflects a new anticipated go-live timeframe of July 2020 with a critical path element of the completed build, which I keep harping on this, because it is important, the completed build is the core EHR, plus the interfaces, plus the workarounds or alternate workflows.

Ma'am, we can deliver that schedule to you as well next week as part of our March 10th deliverable.

Ms. LEE. Great.

Mr. Case, does Dr. Fischer's statements on staffing match OIG's observations?

Mr. CASE. Yes. They asked for 108 or anticipate 108, last time we checked they were at 51. They are making progress, the question is can they continue to make progress, and we do not doubt their commitment to that and their efforts in that regard.

Ms. LEE. When was that?

Mr. CASE. I believe the last time we looked was about 2 weeks ago they were at 50. I think that is an accurate number as of then, but they may have increased it some since then.

Ms. LEE. Mr. Dalton, what things have to happen between now and your new July go-live date?

Mr. DALTON. There are several activities. We will be doing our build completion, we will be working on the additional items we are bringing forward as part of Capability Set 1. We will be doing additional testing, there will be training activities. We will be meeting with our counterparts here on a cadence and from a governance and project management perspective, but really it is—and we will be adding some additional rigor and discipline to the process via operational readiness assessment and some other event activities as well.

Ms. LEE. Dr. Glynn, I wanted to—and this might be Dr. Fischer—in terms of the training necessary to roll this out in July, how many thousands of hours did you say?

Ms. GLYNN. I think we estimated somewhere around 20,000 hours.

Ms. LEE. Twenty thousand hours?

Ms. GLYNN. Yes.

Ms. LEE. When do you anticipate—I mean, the training that has been done, is it sort of a start-over at this point?

Ms. GLYNN. For the user training, yes. That will commence in full, as Mr. Windom said, once that completed build is available.

Ms. LEE. Dr. Fischer, do you feel that the new time lines properly address the issue that your personnel had with the original time line? I mean, are you confident that we can—that this 4-month delay is a sufficient amount of time?

Dr. FISCHER. At this moment, I am. I think my staff had a large sigh of relief when we were able to slow this forward progress in order to dot some of the I's and cross the T's, as both Cerner and VA learned about initial implementations in a large Federal health

care system. There is just not a ton of experience with initial implementations in an agency our size, so we both have to be willing to learn and we are learning.

Ms. LEE. Great.

Dr. Stone, is the VHA satisfied with this new time line?

Dr. STONE. With your forbearance, a bit of nuanced answer. That answer is yes, but there are gates that must be met. As Mr. Windom has said, we are expecting large numbers of interfaces to come on line in March, we are expecting the finish of the build in April and May of both the processes, what is the VA-Cerner Millennium product, as well as the interfaces, and then we need about 6 weeks of training and about 2 weeks for an end-to-end operational assessment. At each one of those there is a gate that my answer could change. Am I optimistic? Absolutely, because I have got great partners here, and the people you see at the table are all committed to getting to the same place, but there are gates that must be met in order to sustain that optimism.

Ms. LEE. Mr. Windom, when do you expect the training domain to be pulled?

Mr. WINDOM. Ma'am, at this juncture, we believe that April 6th or thereabouts. Again, I can give you the granularity you are looking for included when we anticipate the completed build, we anticipate the interface. What I do not want to do is speak on the record about specific dates when I can give you the absolute document next week.

In addition, we believe that that completed build, as a lesson learned for this training environment, is that the completed build is mandated before we start the superuser and the end user training. Again, you will see that all laid out and you will see that our timeline supports the optimism of a July go-live timeframe.

Ms. LEE. Thank you.

I now recognize Ranking Member Banks.

Mr. BANKS. Thank you, Madam Chair.

Dr. Stone, I want to make sure I understand which Cerner capabilities have been pulled forward to be available in July and which ones were judged nonessential for the initial go-live. I will start with the most important one, the prescription reordering capability in the patient portal. Please explain how this will work now, what alternatives you explored, and what the veteran's experience will be in Spokane and Seattle.

Dr. STONE. This is an automated process in what we call our CMOP program, our Consolidated Mail Order Pharmacy. In order for us to mitigate what is not complete, we will need a telephone bank of trained pharmacists and pharmacy techs that literally will receive these telephonically; that is the workaround mitigation. That will also require the interface of audio care, which is what we use to request, as well as ScriptPro and Omnicell, in order to be fully functional.

Now, Omnicell is what allows us to really tag in supplies that are delivered, as well as our utilization rates. ScriptPro is also a prescription refill automation system, which is part of the mitigation strategy. All of those interfaces need to be completed, some of them are in Capability Set 2, some in 1, but the key piece is we must be able to have a manual phone bank that we then publicize

to our veterans that they can call in for their refills, and then we will manually enter that as a workaround.

The joy of this delay is we may be able to avoid all of that by pulling forward the connections into what we are now defining as Capability Set 1.1. We have been very hesitant to move the complete goalposts of Capability Set 2 and 1 for the reasons that we have discussed already. We do not really want to move the goalposts, but pharmacy refill is absolutely a potential major risk, as Mr. Case has identified, and we have been working hard to mitigate that.

I think I have answered your question.

Mr. BANKS. I think so. Same question, though, please explain the video visit capability. This is a really important one to move forward.

Dr. STONE. I think it is. I do not think technically—I would probably defer to John Windom on the technical pieces of this or his support and John Short, but mitigation in a critically short, vulnerable area like Spokane where we have trouble hiring providers, the use of video telemedicine is something we do across the Nation. In fact, we are the world's leader in provision of telemedicine services, more than 2.6 million visits last year across the Nation. We are prepared to provide that, but the interface is necessary, and I would refer, if you are amenable to that, to Mr. Windom to actually try to answer it.

John, I do not know if——

Mr. BANKS. I have a lot more to ask and a very little——

Mr. WINDOM. Yes, sir, we can come in and brief your staff, sir, on all the 1.1 elements in whatever granularity you would like moving forward.

Mr. BANKS. Okay. Dr. Stone, what about Auto Prescription Remit and Beneficiary Travel Kiosk capabilities?

Dr. STONE. Yes, those are huge valuable pieces. We cannot exist without the ability to do beneficiary travel and so those kiosks must be linked.

Mr. BANKS. How about Vitals Link Integration? I understand this one pertains to medical devices.

Dr. STONE. Yes, I cannot speak to the technology of that.

Mr. BANKS. All right. Dr. Stone, what solution have you come up with to improve the processing of community care referrals and authorizations? The problem seems to be limited integration between Cerner and Health Share Referral Manager, and an awkward workflow involving HSRM and the joint legacy viewer.

Dr. STONE. I think that is a piece of it, I think the other piece of it is just sheer volume. Since MISSION Act went into effect, the 6 months before MISSION Act we referred nationwide 2.7 million veterans to community care, the next 6 months we referred 3.8 million, and part of the backlog that Dr. Fischer is experiencing is just sheer growth in community care. About 35 percent of our visits are now community care at a cost of about 27 percent of our actual budget.

We are working to resolve that nationwide with our clinical resource hubs and the interfaces that are necessary, but I would defer to OEHRM on the actual technical pieces and capability of those software systems.

Mr. BANKS. All right. What have you decided to do to pull forward with the Care Aware Multimedia functionality? This is a very important Cerner imaging capability for cardiology, radiology, and others, and I understand the difficulty has been getting an authority to connect from DOD, so that VA can upgrade to a newer version of CAM.

Dr. STONE. That is an essential workaround that requires multiple screen looks from our providers and going into our joint legacy viewer until that capability comes online in IV-2—I am sorry, in Capability Set 2.

Mr. BANKS. Okay. Mr. Dalton, what will the impact of this be? Are you satisfied if VA employees will have to use VISTA or Joint Legacy Viewer (JLV) to look at medical imaging?

Mr. DALTON. It is a standard commercial process. Many times we actually interface to existing Picture Archiving and Communication (PAC) systems and they utilize those. This is not entirely different than what we might do commercially, sir. Am I satisfied? No. CAM-7 needs to be there, they need to be able to view images in a greater way. Do I think that it is appropriate for it to be in Capability Set 2? I believe so, sir, based on our commercial experience.

Mr. BANKS. Yes, this seems really important.

Mr. DALTON. It is.

Mr. BANKS. Mr. Windom, before the delay, the decision to split the Spokane implementation in Capability Set 1 and Capability Set 2 created 68 alternative workflows. Most of these are work processes that rely on Cerner as well as VISTA, and some of them are manual. How many alternative workflows are you going to use the delay to eliminate?

Mr. WINDOM. Sir, I will have to get back with you on that. I do not even want to speculate. I know the number goes down with the introduction of 1.1 capabilities that are being brought forward. I guess I would offer, you know, we view workarounds as this negativity, there is workarounds in Computerized Patient Record System (CPRS), there are hundreds, if not thousands of workarounds. What we are doing as part of our efforts are creating an integrated system where you do not have to go in and out of the system. You will see that number going down over time, sir, but we can get to you on exact numbers, but that is being dwindled and it is part of our transition activities, with more even being eliminated as part of Capability Set 2.

Mr. BANKS. All right. I know we have to go vote, I will just finish with this last question about the patient portal from our November hearing. Which parts of the medical record, which prescription refills, and which types of appointments will veterans be able to view or request using the Cerner portal, Mr. Windom?

Mr. WINDOM. Sir, I will have to get back to you on that, I do not have the specifics. What I would offer to you is that interim solution is the Cerner portal with a migration to a hybrid portal as we move into Capability Set 2. We have no desire to reduce the capabilities that we deliver to our veterans or reduce the veteran experience.

Again, that is what is good about the flexibility and the partnership with Cerner is that we are evolving to even a better State and that is going to come with the Capability Set 2.

Mr. BANKS. Okay. With that, I will yield back. Thank you very much.

Ms. LEE. Thank you. Before we wrap up, I just want to focus a little bit on the infrastructure.

Mr. Case, in your written testimony you indicated that as of February 25th, 2020 contracts had yet to be awarded for critical infrastructure upgrades, can you elaborate on which upgrades you are talking about?

Mr. CASE. Yes. From our perspective, and we take the perspective from the VA, one of the issues is the cooling of the telecom rooms, and that is something that there is a temporary solution to and then ultimately moving to a permanent solution. Our understanding is the contract for the fan systems that will be the temporary solution has yet to be awarded as of today. Now, that does not mean it can not get in place and be done, but once again we continue to try to hold VA to the 6-month time line, recognizing that that is an important lesson learned from DOD, that is the critical one.

Ms. LEE. What is the potential risk to patient safety or system stability caused by the lack of this infrastructure?

Mr. CASE. The issue is, they may be up and running, it goes to equipment longevity—if I have said that right—and then, you know—so, ultimately, if there is an effect on the equipment, it can affect functionality, we hope that is not the case. There is a plan in place to have a temporary solution. We point it out, because let us put that temporary solution in place in time and that is the reason we point that out.

Ms. LEE. All right. Well, we have to run off to vote, so we are going to wrap this up. We look forward to reading the full OIG report when that comes out. We expect we will probably have some additional questions given the information you gave us, but I want to thank you all first and foremost for your commitment and your service to veterans and our country and for taking on what is an incredibly complex project. I hope that we continue to have the transparency that we need to provide the proper oversight of this project, you know.

I especially appreciate that the VA listened to personnel who were on the front line who had concerns about safety and so thank you for taking that step. I know we had talked previously about making sure we get this right instead of meeting a deadline. That being said, you know, I want to make sure we have 4 months for this July date, what are our plans to meet that and to make that a realistic deadline. I am very concerned about the infrastructure issues, especially with cooling. It to me is just—I just feel like we are shooting ourselves in the foot on that one. I hope that we can see some progress made with that, especially given how expensive this project is. I would hate to see us get it up and running and then see, you know, the shelf life diminished or, furthermore, a complete system breakdown, which would jeopardize patient safety, so hopefully we can get that on track.

We have 4 months to build, to test, to train. We have the infrastructure issue. We look forward to seeing the plans that you are providing today and hope that this will be the beginning of an honest and transparent dialog back and forth. You know, honestly, God

speed, we hope that you guys get this right. You know, you are right, this is an incredibly important project not just for the VA, but for health care across this country. We will continue to have some hearings on this as we progress and I thank you all for being here today.

With that, all members will have 5 legislative days to revise and extend their remarks and include extraneous material, and the hearing is now adjourned.

[Whereupon, at 11:29 a.m., the subcommittee was adjourned.]

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# **A P P E N D I X**

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## PREPARED STATEMENT OF WITNESSES

### Prepared Statement of Melissa Glynn

Good afternoon Madam Chair, Ranking Member Banks, and distinguished Members of the Subcommittee. Thank you for the opportunity to testify today in support of the Department of Veterans Affairs (VA) Electronic Health Record Modernization (EHRM) initiative and deployment of the Cerner Millennium Electronic Health Record (EHR) solution. I am accompanied today by Dr. Richard Stone, Executive in Charge of the Veterans Health Administration (VHA), Mr. John Windom, Executive Director of the Office of Electronic Health Record Modernization, and Dr. Robert Fischer, Director of Mann-Grandstaff VA Medical Center (VAMC).

I would like to begin by introducing myself and my role within VA. The Office of Enterprise Integration helps guide VA operations, inform decisionmaking, and integrate initiatives within the Department and with other agencies. In my role, I support the Secretary on major transformational initiatives, including our supply chain modernization, financial management business transformation, the VA Maintaining Internal Systems and Strengthening Integrated Outside Networks Act and EHRM deployment. In this capacity, I work closely with leadership in our Office of EHRM and VHA to support implementation activities at the enterprise level. Additionally, my office is the lead for coordination activities with the Department of Defense (DoD) which is vital to this joint endeavor. Our internal coordination with DoD will ensure seamless delivery of quality health care to Servicemembers, Veterans, and qualified beneficiaries.

In November 2019, VA appeared before this subcommittee to provide testimony and an update on the process of the implementation of the EHR system. We met critical milestones including site assessments, infrastructure upgrades, the migration of 78 billion health records, development of an enterprise interface, and the completion of 8 national user workshops. These workshops spanned nearly 1,500 sessions and over 50,000 cumulative work hours by more than 1,000 frontline clinicians and end users from across the enterprise. We established national councils comprised of VA and DoD clinicians, technologists, and industry leaders to collaborate as we build a single, standardized system.

We received valuable insight from DoD, which has brought lessons learned and context to the EHR configuration, and by industry advisors who shared commercial best practices. Through these workshops, we reached consensus on more than 1,300 design decisions, and over approximately 900 workflows were standardized to best meet the needs of our Veterans.

These efforts have moved us beyond mere partnership to support true coordination with DoD. We established a joint Federal Electronic Health Record Modernization Office, and in Spring 2020, we are poised to deliver a Joint Health Information Exchange with DoD. This will benefit all legacy and modernized VA and DoD health care sites, as well as community providers who exchange records with both Departments. I am proud of our progress, and we are continuing to work toward a successful EHR deployment.

### EHRM Deployment

VA pioneered the first EHR in the 1980's, which paved the way for widespread EHR adoption throughout the U.S. health care system. To achieve greater interoperability with DoD, in May 2018, VA awarded Cerner Corporation a contract to replace the Department's legacy patient record system with the commercial-off-the-shelf solution adopted by DoD. A single, interoperable solution across VA and DoD will enable the secure transfer of Active Duty Servicemembers' health data as they transition to Veteran status. This 10-year modernization effort will create a lifetime of seamless care for Servicemembers and Veterans.

VA's health care platform is composed of a highly complex clinical and technical environment, delivering Veterans specialty care not typically supported by commercial EHRs with unique requirements that must be configured and properly integrated to ensure continuity of care. No other health care organization in the world

is attempting something of this scale and complexity, and we are committed to getting this absolutely right for our Veterans.

We selected the Mann-Grandstaff VA Medical Center, in Spokane, Washington, as our Initial Operating Capability (IOC) site and established a very aggressive and optimistic deployment timeline that also prioritizes patient safety, balances risk, enhances user adoption, and leverages lessons learned from DoD's deployment. During the IOC deployment, we are working to identify efficiencies to optimize the schedule, hone governance, refine configuration, and standardize processes for future locations.

Our immediate focus for our IOC site is readiness of the system to support training. After we completed the second Integration Validation Testing (IV2) in early February 2020, we identified that additional efforts are needed to configure the system to meet VA's unique requirements for community care, beneficiary travel, and others—for which there are not similar requirements elsewhere in modern health care. We were able to identify these issues because leadership and clinicians at the Mann-Grandstaff VA Medical Center raised concerns using feedback mechanisms built into our deployment plan. This led to a decision on whether to sustain the user training schedule or continue development to move the system build closer to 100 percent complete before conducting training. The training event, which was scheduled to begin the week of February 10th, would have marked the start of ongoing education for professional staff—clinicians, providers, and VA staff—who will use the new EHR.

The governance process I established to support leadership oversight provided a check point to validate the beginning of this end user training and the overall implementation timeline with the completion of IV2. Thus, reaffirming the timeline for our go-live date was anticipated to occur at this point. As the IOC timeline has been expected to occur over many months, a re-planned go-live date will still occur during the IOC period.

It is important to note that we are not adjusting our 18-month timeline for IOC at Mann-Grandstaff VAMC. We are still operating within the designated time period for IOC and continuing to build capabilities into the system so that our clinicians and users can train on a more complete EHR interface.

Congress and other stakeholders have cautioned VA not to rush and deploy a product that would fall short of the quality patient care Veterans expect and deserve. We could not agree more that getting it right is more important than meeting an aggressive schedule, and we decided to postpone our go-live date at Mann-Grandstaff VAMC. Detecting course correction opportunities prior to go-live is at the core of our approach to deploying an EHR solution. This approach ensures patient safety, security, and a functional system for all VA health care professionals.

### **Current Status**

A large-scale EHR deployment follows an iterative model in which new capabilities are added as the system is deployed. Though we initially planned to commence user training when the system was 75–80 percent complete, our clinicians in the field identified some critical requirements that must be completed prior to go-live at Mann-Grandstaff VAMC.

If not addressed, these critical requirements would pose significant risk to preserving continuity of care to our Veterans, thus VA will take all precautions to manage this risk to an acceptable level for our clinicians and users, and even more importantly, our Veterans. Therefore, we decided to continue development to move the system closer to 100-percent complete before conducting user training.

We are currently working to have the system closer to 100 percent and expect to validate this milestone in the spring. Once we validate functionality of the system, we will commence user training with the goal of establishing a new go-live phase in July 2020.

Ultimately, our EHR transformation success revolves around user adoption. By adjusting our training schedule, we will be adding additional capabilities originally scheduled to be incorporated after our go-live date. These capabilities are intended to enhance user adoption, improve productivity and efficiency for our field staff, and enhance the Veteran experience.

It is also important to recognize that we are not doing this alone. Our VA deployment schedule leverages lessons learned as we deliver a single, longitudinal health record at VA and military health facilities.

### **EHRM Budget**

With the support of Congress and the President, we have a Fiscal Year (FY) 2021 budget request of \$2.6 billion for EHRM, which is \$1.2 billion above Fiscal Year 2020. This budget request provides necessary resources for full deployment of VA's

new EHR solution at the remaining sites in Veterans Integrated Service Network (VISN) 20 and VISN 22. Additionally, it funds the concurrent deployment of waves comprised of sites in VISNs 7 and 21. This budget will also allow us to continue implementation efforts and nationwide deployment of the simultaneous Centralized Scheduling Solution.

We are currently testing the Centralized Scheduling Solution at the Chalmers P. Wylie Ambulatory Care Center, in Columbus, Ohio, and through our governance process, we will validate commencement of user training and our implementation schedule. Our intent is to implement this new, resource-based scheduling solution across the enterprise on an accelerated timeline and enhance scheduling accuracy. This initiative will bring the benefit of a modern, resourced-based scheduling system to VA and to our Nation's Veterans before the full EHR solution is implemented. By providing this capability sooner, VA will improve timely access to care for Veterans, increase provider productivity, and enable the adoption of the full EHR solution.

Because we are still operating within our designated IOC 18-month schedule, we do not anticipate a change in funding requirements at this time. Should our deployment schedule change such that it impacts our current or proposed budget, we are committed to providing Congress with timely notification.

### **Closing**

I would like to once again thank Congress and specifically, this Subcommittee, for your continued support and shared commitment to our success. Because of your support, we are able to continue our mission of improving health care delivery to our Nation's Veterans and those who care for them while being a good steward of taxpayer dollars. We are committed to providing the high-quality care and benefits that our Nation's Veterans deserve, and we will continue to keep Congress informed of milestones as they occur.

Madam Chair, Ranking Member Banks, and Members of the Subcommittee, thank you for the opportunity to testify before the Subcommittee today to discuss our deployment of the Cerner EHR solution. I would be happy to respond to any questions that you may have.

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### **Prepared Statement of David Case**

Madam Chair, Ranking Member Banks, and members of the Subcommittee, thank you for the opportunity to discuss the Office of Inspector General's (OIG's) oversight of the Department of Veterans Affairs' electronic health record modernization (EHRM) program. The OIG recognizes the significant level of effort and commitment required by VA to manage and facilitate this massive and complex system implementation, including the tremendous work already conducted by VA staff to date. The OIG's initial oversight efforts of the EHRM program have been primarily focused on the planning, preparation, and other activities related to the initial deployment location—the Mann-Grandstaff VA Medical Center (Mann-Grandstaff VAMC) in Spokane, Washington, and its affiliated facilities.<sup>1</sup> The lessons learned by OIG audit and healthcare teams about VA's preparation and other aspects of implementation related to infrastructure, access to care, and EHRM risk mitigations at this first site will help assess what works and where there are deficiencies that must be addressed as additional facilities go live. Our findings focus on decisions and actions leading up to the initial site deployment and, when the related reports are released, are meant to serve as a roadmap for aspects of future VA implementation efforts. Failure to redress identified issues puts VA at risk for cascading failures, breakdowns, and delays when deploying the new electronic health record (EHR) system nationwide in the years to come.

There are two forthcoming reports with the OIG's findings about the deployment of the new EHR system at the Mann-Grandstaff VAMC. Currently, both are in draft and, consistent with our practices, are being reviewed by the Department. These reviews allow VA offices to comment on OIG findings and recommendations, as well as to provide responsive action plans to implement the recommendations. After receiving VA's responses, OIG staff will integrate that feedback into the final reports and publish them. While it is not the OIG's practice to testify regarding not-yet-pub-

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<sup>1</sup> On February 11, 2020, the Executive Director of the Office of Electronic Health Record Modernization (OEHRM) confirmed to OIG staff that the go-live date at Mann-Grandstaff VAMC was delayed. Because the new deployment date is unknown, the go-live date referred to in this statement is the prior VA target of March 28, 2020. Mann-Grandstaff VAMC, part of Veteran Integrated Service Network (VISN) 20, has a medical center and four community clinics located in Ponderay and Coeur d'Alene, Idaho; Libby, Montana; and Wenatchee, Washington.

lished reports, due to the timing of this hearing and VA being in receipt of the reports, the findings will be generally discussed today.

The first OIG report discusses the potential impact of the transition to the new EHR system on patient access to care and the initially available capabilities. The issues go beyond technical concerns, however. For example, the OIG healthcare team found that the Mann-Grandstaff VAMC lacks adequate staffing to navigate the additional strains of the transition and had not received formal, written guidance on minimizing obstacles to patients' access to care. The OIG also found that the risk mitigations facility leaders would employ during the go-live period with incomplete capabilities present a significant risk to patient safety. The second OIG report focuses on the progress and gaps in VA's efforts to update the Mann-Grandstaff VAMC's physical and information technology (IT) infrastructure. The OIG audit team found critical physical and IT infrastructure upgrades have not been completed at the Mann-Grandstaff VAMC in line with VA's own timelines. On February 10, 2020, a VA spokesperson announced that the new EHR's deployment scheduled for March 28, 2020, would be postponed indefinitely because at 6 weeks prior to go-live, it was only 75–80 percent ready.

## BACKGROUND

The OIG's mission is to conduct effective oversight of VA programs and operations to help make certain that veterans receive access to quality health care and benefits in a timely manner, as well as ensure VA funds are appropriately spent. The OIG is conducting early oversight of EHRM because of the tremendous cost and scale of the effort and because prior modernization efforts by VA have been unable to achieve seamless interoperability with the Department of Defense (DoD). Since 2000, the OIG has identified VA's information management as a "major management challenge" because VA has a history of not always properly planning, overseeing, and implementing updates to its critical IT investments.<sup>2</sup>

The VA's legacy EHR system, VistA, has served the department for more than 40 years but lacks needed interoperability and is too costly to maintain. While VA has taken steps to modernize VistA, these attempts have not resulted in a single, interoperable EHR system with DoD. Moreover, the Government Accountability Office (GAO) previously reported that these prior efforts have cost VA over a billion dollars.<sup>3</sup> VA determined that using a common EHR system with DoD will drive better clinical outcomes by giving healthcare providers a more comprehensive picture of the veteran's medical history and enhance collaboration with VA's community healthcare partners.

On June 1, 2017, then VA Secretary David Shulkin signed a "determination and findings" document declaring VA would acquire the new EHR system from Cerner Corporation using an exception to the Federal Acquisition Regulation requirement for full and open competition. Cerner developed the core platform of DoD's new EHR system, Military Health System (MHS) GENESIS.

The determination and findings provided several rationales for why the acquisition of the new EHR system was in the public's interest. The reasons included the ability for VA to gain efficiencies from DoD lessons learned, accelerated delivery of a modern EHR to support improved health care, and the facilitation of a more consistent patient experience between VA and DoD. In May 2018, VA awarded Cerner an almost \$10 billion contract to replace VistA.

In addition to the Cerner contract, VA estimated also needing \$6.1 billion for program management and infrastructure-related costs during the new EHR's 10-year-deployment. Of the \$6.1 billion, about \$4.3 billion is for infrastructure-related costs, such as IT infrastructure and interfaces. The infrastructure cost estimates do not cover, however, some physical infrastructure upgrades, such as cabling, ventilation, air conditioning, and physical security, to be funded by the Veterans Health Administration's (VHA's) nonrecurring maintenance budget. While the OIG is not aware of any VA estimate for these costs at the current time, VHA has requested facility assessments be completed at all sites by March 31, 2020. Once those are done, VA may have a better idea of gaps between the current and necessary future State of facilities nationwide and be able to develop informed cost estimates. The remaining \$1.8 billion is for program management.

In Fiscal Year 2020 alone, the OEHRM was appropriated \$1.5 billion in program funding. Of this amount, approximately \$328 million is estimated for infrastructure

<sup>2</sup>Department of Veterans Affairs, "Inspector General's VA Management and Performance Challenges," Fiscal Year (FY) 2019 Agency Financial Report, sec. III, (2019). The OIG is required to report annually on VA's major management challenges.

<sup>3</sup>Government Accountability Office, "VA Health IT Modernization: Historical Perspective on Prior Contracts and Update on Plans for New Initiative," July 25, 2019.

costs, such as IT infrastructure end-user device upgrades. VHA and OEHRM officials told OIG staff that funding for some of the physical infrastructure upgrades to facilities will come from VHA's nonrecurring maintenance budget, which is in addition to the \$328 million. These infrastructure upgrades have the potential to represent a significant cost to VA, as these upgrades at the Mann-Grandstaff VAMC alone are estimated by VA to cost about \$23.2 million.

### **Developing the New EHR**

OEHRM and Cerner worked with various VA offices to develop the required clinical, technical, and structural readiness deployment requirements for the new EHR. VA established 18 clinical councils composed of subject matter experts from VA, VHA, Cerner, and DoD. These experts reviewed MHS GENESIS's functions and determined which ones needed to be further developed to meet VHA's clinical and administrative requirements.

At eight national and eight local workshops, clinical councils configured the new EHR. Within a workshop session, each council compared VHA's standards with the commercial Cerner software. If the council identified gaps, the council worked with Cerner to design a specific workflow that best met VA needs. A workflow describes business or clinical steps from beginning to end, including key tasks and the roles of the individuals who perform the tasks.<sup>4</sup> Cerner groups related workflows into a capability. For example, the separate functions of medication refills and renewals are part of the outpatient pharmacy capability, whereas inpatient pharmacy functions would be considered a different capability. Capabilities are further organized under a series of "solutions," such as the pharmacy solution that contains all inpatient and outpatient pharmacy functions.

As Mann-Grandstaff VAMC approaches going live, Cerner will train clinical and administrative staff on how to use the new EHR. The two-part integration and validation testing, based on actual patient scenarios, was intended to ensure the new EHR will function correctly. The testing also serves as a rehearsal for going live and provides information for readiness assessments.

### **Governance**

There are two entities responsible for making the EHRM effort a success. The first is VA's OEHRM, which was established in June 2018. The OEHRM is responsible for ensuring VA properly prepares for, deploys, and maintains the new EHR. This office is also responsible for coordinating with DoD on numerous issues, including applying DoD's lessons learned during its system implementation. While executive leaders from the OEHRM report directly to the VA Deputy Secretary, the office collaborates with VHA and the Office of Information and Technology (OIT).<sup>5</sup> All three VA entities are supposed to work together to upgrade the infrastructure needed to deploy the new EHR system. For example, the OEHRM developed the technical requirements for the new system, while OIT and VHA shared the responsibility to define the requirements for proper IT and physical infrastructure. OIT also aligns projects and plans to support IT infrastructure upgrades and uses local staff for surge support during the transition from VistA to Cerner's system. VHA is responsible for decisions related to medical devices and facility upgrades, and maintenance of the physical infrastructure. The OEHRM has a director of infrastructure readiness who provides oversight of the infrastructure upgrades related to EHRM, but this position was vacant until August 2019.

On March 1, 2019, DoD and VA jointly established the Federal Electronic Health Record Modernization (FEHRM) Program Office. This office replaced the Interagency Program Office as the single decisionmaking authority for all future EHRM efforts for VA and DoD. As of December 2019, many details of this Office were still being determined, but Section 715 of the conference report to the *National Defense Authorization Act for Fiscal Year 2020* states that the Offices' Director and Deputy Director will serve 4-year terms with DoD and VA alternating as the selecting agencies for both positions.

### **Deployment Schedule**

<sup>4</sup>A specific workflow might describe the entire process from the time a patient comes to the outpatient pharmacy window in need of a prescription refill to the successful completion of the task. A different workflow might describe, from start to finish, the steps required by both patient and provider to renew a prescription.

<sup>5</sup>On February 21, 2020, VA Secretary Robert Wilkie signed a memo designating the Office of Enterprise Integration as the integrator of the EHRM project, reporting progress and challenges directly to him. The memo did note that the Office of Deputy Secretary will retain responsibility for fiscal oversight as required by the *Further Consolidated Appropriations Act, 2020*, Public Law 116-94.

VA's deployment schedule includes three Initial Operating Capability (IOC) sites followed by 47 additional cycles, which OEHRM calls "waves," for the remaining sites VA-wide through Fiscal Year 2027. The three IOC sites are Mann-Grandstaff VAMC and two sites in the Puget Sound Health Care System in Washington—the Seattle VAMC and American Lake VAMC in Tacoma along with their associated facilities. For the IOC sites to be effective learning grounds, infrastructure upgrades should be in place six months before the go-live date so that weaknesses can be identified and addressed. This is a clear takeaway from the DoD experience. OEHRM leaders have testified to this Subcommittee their commitment to making timely infrastructure upgrades six months before going live as a standard.<sup>6</sup>

#### **Go-Live Date & EHR Capabilities**

The day that a site turns on the new EHR system at the IOC site for personnel to use is being referred to as the go-live date. However, going live does not mean that the full system with all functionalities will be up and running. As early as July 2019, OEHRM determined that not all EHR functions would be available for the planned March 2020 go-live date. In response, OEHRM leaders made the decision to deploy EHR functions in separate blocks at different times. These separate blocks are called "capability sets." Capability Set 1 was scheduled to be deployed in March 2020, with Capability Set 2 scheduled for deployment approximately 6 months later. The new EHR has more than 300 capabilities in total, and while the majority are included in Set 1, there are some significant functions missing. For example, cardiology and some aspects of telehealth are in Set 2. As discussed later in this testimony, the absence of an online patient portal in Set 1 for medication refill requests is a significant concern.

Once Mann-Grandstaff VAMC goes live with the new EHR system, care providers and administrators will use it for clinical and administrative work, while relying on the Joint Longitudinal Viewer (JLV) to view records not contained in the new EHR. These include records from VA medical centers not yet using the new EHR.<sup>7</sup> Similarly, all VA staff who do not have the new EHR will be required to view facilities' patient information through JLV. Facility staff will be required to switch back and forth between the new EHR and JLV to correctly capture all clinical and administrative information.

When IOC sites go live, providers will need to adjust to using the new EHR for tasks associated with taking care of patients. They also will have to view consult referrals, active inpatient orders, and active outpatient laboratory and imaging orders in JLV, and then manually reenter the information into the new EHR to ensure action. For example, if a clinician ordered an x-ray in VistA for a patient, and that x-ray has not been acted upon by the go-live date, the clinician must find the order in JLV and manually reenter it into the new EHR so that the study is documented, scheduled, and completed.

In July and August 2019, OEHRM presented the capabilities in Set 1 and Set 2 to leaders at the Mann-Grandstaff VAMC and the VA Puget Sound Health Care System, the initial operating locations originally scheduled for spring 2020 deployment. Due to the absence of some required functions in Set 1, VA Puget Sound Health Care System leaders decided to delay their IOC rollout until the completion of Set 2 out of concern for the clinically sophisticated nature of their healthcare system. Mann-Grandstaff VAMC leaders decided to continue with the March 2020 go-live date and began developing mitigation strategies for the clinical and administrative function gaps between the deployments of Set 1 and Set 2.

The first report in this testimony discusses VA's work to mitigate risks during the new EHR's transition that will impact the facility's ability to provide timely care.

#### **REVIEW OF ACCESS TO CARE AND CAPABILITIES DURING THE TRANSITION TO VA'S NEW EHR**

<sup>6</sup>In November 2018, the OEHRM's Chief Technology Integration Officer told this Subcommittee that the office planned to have technology readiness done six months before going live. On June 12, 2019, the OEHRM's Executive Director confirmed to the Subcommittee VA's plan for infrastructure to be ready six months prior to the go-live date. Later in the hearing, OEHRM's Chief Technology Integration Officer admitted that not all infrastructure would be completed by the go-live date. In November 2019, in an interview with OIG staff, the OEHRM's Executive Director confirmed that VA's objective to have infrastructure completed six months before the system is deployed at the IOC sites is "critical" to mitigating setbacks that occurred at DoD's sites. Additionally, OEHRM's integrated infrastructure plan, dated November 2018, stated infrastructure upgrades are "expected to be complete no later than six months prior to the go live event."

<sup>7</sup>The JLV is a web application that provides an integrated, read-only view of EHR data from VA, DoD, and some community partners through the Veterans Health Information Exchange, a program that allows participating community providers to securely share health information.

The OIG focused this review on the initially available capabilities and the potential impact of the EHR transition on access to care at the Mann-Grandstaff VAMC.

#### **Facility Management of Access to Care Risks**

The OIG found that Mann-Grandstaff VAMC leaders consulted with DoD staff who transitioned to the Cerner system in 2017 and experienced a 30-percent decrease in productivity for 18 months following the transition. This reduction will generate access-to-care risks that require mitigation strategies. Thus, facility leaders used a 30-percent decrement in productivity over a 12-to-24-month period as a measure when generating a mitigation plan. The Mann-Grandstaff VAMC's mitigations include adding facility staff, enhancing clinical space, changing clinic processes, and increasing the use of community care.

Facility leaders told OIG staff that VHA's Office of Healthcare Transformation (OHT) gave strong support to help prepare for decreased access to care. However, the OIG's review of OEHRM activities during the last two years did not reveal evidence of final operational guidance to the Mann-Grandstaff VAMC on the matter. Absent that evidence of written guidance, facility leaders utilized a self-designed mitigation plan.

In June 2018, facility leaders told the VISN Director that a projected staffing shortage might prevent Mann-Grandstaff VAMC from meeting the access to care challenges of the new EHR implementation. Thus, in September 2018, facility leaders requested hiring 102 employees (over time this request increased to 108). In April 2019, despite Mann-Grandstaff VAMC leaders' concerns regarding staffing levels for the new EHR implementation, VISN 20 conducted an analysis of fiscal resources, which led facility leaders to initiate a hiring pause, with an aim to meet the VISN's goal to decrease overall staffing by 88 positions.<sup>8</sup> The hiring pause continued until October 2019. As of February 5, 2020, 48.5 of 108 new staff had been onboarded.

The OIG identified that Mann-Grandstaff VAMC leaders addressed recent in-house access to care challenges within primary care, but a significant backlog of 21,155 community care consults remained as of January 9, 2020. The OIG found that while facility staff have been working additional hours since December 2019 to reduce the open community care consult backlog, that same staff will face other obstacles when going live due to the increased manual work needed to schedule community care owing to Set 1's limited capabilities. VHA and the facility are also aware that community care access will be challenged by increasing demand and limited supply in the Spokane area.

#### **Capability Limitations**

OEHRM and Cerner determined in July 2019 that not all anticipated capabilities of the new EHR would be available for the initially proposed go-live date. Mann-Grandstaff VAMC leaders worked with OHT and OEHRM to generate mitigations for the incomplete capabilities in Set 1 at the go-live date.

By August 2019, both OHT and facility staff developed processes to track mitigation efforts. The facility mitigation tracker has 84 strategies for minimizing the impact of the missing capabilities classified as moderate and high risk. Since then, facility risks and mitigations have been regularly updated and tracked with progress updates reported to the wider group of project stakeholders.

Facility leaders and staff told the OIG healthcare team of concerns related to the deployment of capability sets including

- Not knowing what capabilities would be available at the IOC;
- Changing capabilities to meet the go-live timeline, instead of changing the go-live timeline to meet the completion of capabilities;
- Challenges in developing training due to incomplete information regarding which capabilities would be available at the IOC;
- Limitations in Set 1 that present as "significant handicaps at day zero;"
- Requiring staff to access two systems (JLV and the new EHR) while providing patient care;
- Feeling compelled to go-live in March 2020, without the full capability being ready; and

<sup>8</sup>A VISN leader reported that in the 2018 fiscal year, substantial hiring by Mann-Grandstaff VAMC led to a budget deficit. Facility leaders acknowledged to the OIG that budget planning errors for the 2019 Fiscal Year led to a projected deficit, which exceeded \$20 million for personnel. These events complicated planning for adequate staff hires during the EHR transition.

- Inability to accurately predict patient safety risks because of incomplete information about which capabilities would be available at the IOC.

For example, online prescription refills, the most popular mechanism for refilling prescriptions at the Mann-Grandstaff VAMC, was identified as a capability that would be absent at the go-live date. Examples of mitigation plans include the need for

- Care in the community staff to navigate between the new EHR, JLV, and other third-party software to determine patient eligibility, and track consult approval and status;
- Primary care teams to manually enter all non-VA patient medications to ensure a complete record of active medications in the new EHR; and
- Patients who previously ordered refills of medications through the MyHealtheVet portal to use alternative means for refill requests.<sup>9</sup>

The OIG reviewed facility refill requests during calendar year 2019 and found the MyHealtheVet portal was the most frequently used method for patients to request prescription refills.<sup>10</sup> Facility leaders and staff told the OIG of safety concerns related to losing the MyHealtheVet electronic refill portal and that mitigation strategies seemed insufficient to meet patient needs. This mitigation plan requires patient involvement, and as of January 15, 2020, facility leaders had not yet communicated with patients about the new electronic prescription refill process.

The OIG determined that the work-arounds needed to address the removal of the online prescription refill service create additional barriers for patients to refill medications. The barriers created by these processes present a patient safety risk and the mitigation strategies are insufficient to significantly reduce those risks should a decision to go live at a future date involve only Set 1. The OIG was unable to determine all patient safety risks associated with the new EHR, but the work-around for the electronic prescription refill process alone presents significant concerns as it may impact a patient's ability to fill a life-sustaining medication.

#### **DEFICIENCIES IN INFRASTRUCTURE READINESS FOR DEPLOYING VA'S NEW ELECTRONIC HEALTH RECORD SYSTEM**

In order to deliver patient care using the new EHR, significant infrastructure upgrades are needed to VA's physical and IT infrastructure. The OIG conducted an audit to determine whether VA's infrastructure readiness activities are on schedule at the Mann-Grandstaff VAMC and associated facilities. The audit team examined physical and IT infrastructure to determine VA's readiness to proceed with system implementation and to identify infrastructure challenges that could impact the overall system deployment schedule.

Physical infrastructure refers to the underlying foundation that supports the system, such as electrical; cabling; and heating, ventilation, and air-conditioning. IT infrastructure includes network components such as wide and local area networks, end-user devices (e.g., desktop and laptop computers, and monitors), and medical devices.

VA has recognized the need to apply lessons learned from DoD to avoid deployment setbacks, and as discussed earlier, OEHRM leaders testified before this Subcommittee in June 2019 that having the infrastructure in place six months before system deployment to sites was a program goal, meaning that infrastructure upgrades should have been completed by the end of September 2019.

The OIG found critical physical infrastructure upgrades had not been completed at the Mann-Grandstaff VAMC as of the audit team's site visit in October 2019—less than the six-months prior to the go-live date. The lack of important upgrades jeopardizes VA's ability to properly deploy the new EHR system and increases risks of delays to the overall schedule.

#### **Physical Infrastructure Was Not Upgraded Timely, with Many Upgrades Pending Completion After Going Live**

The audit team found some infrastructure upgrades intended to mitigate diminished system performance are not projected to be completed until months after going

<sup>9</sup>MyHealtheVet is an online personal health portal in which patients can schedule appointments, view medical records, refill prescriptions and send secure messages to their providers.

<sup>10</sup>My HealtheVet, *Get to Know Rx Refill Options*, <https://www.myhealth.va.gov/mhv-portal-web/ss20180423-prescription-refill-options-for-veterans>. (The website was accessed on January 17, 2020.) VA medical facilities provide patients with several methods to refill VA prescribed medications: online through the MyHealtheVet portal, by phone through the automated telephone refill line, in person at a VA pharmacy, and by mail through the VA mail order pharmacy.



live. For example, modifications to telecommunications rooms were not estimated to be completed until up to four months after March 2020. Furthermore, the audit team followed up with VA and confirmed that as of February 25, 2020, contracts had yet to be awarded for some critical physical infrastructure upgrades. Until modifications are complete, many aspects of the physical infrastructure existing in the telecommunications rooms (such as cabling) and data center do not meet national industry standards or VA's internal requirements.

On the week of October 7, 2019, less than six months prior to go-live, the audit team found that all 24 telecommunications rooms and the data center at the Mann-Grandstaff VAMC and associated facilities still needed work completed in order to meet industry and VA standards. Table 1 illustrates the findings from these telecommunications rooms' inspections.

**Table 1. Summary of Telecommunications Room Deficiencies Identified at the Mann-Grandstaff VA Medical Center and Two Associated Facilities (October 7–11, 2019)**

	Cabling Upgrades Needed	Patch Panel Upgrades Needed	Equipment Rack Clearance Not to Standard	Poor Cable Management	Improper Grounding of IT Equipment	Proper Power Supply Lacking
Rooms with deficiencies	22	4	20	19	16	4
Number of rooms inspected	24	19	21	24	24	24
Percent not compliant	91.7%	21.1%	95.2%	79.2%	66.7%	16.7%

*Source: OIG inspections of telecommunications rooms at Mann-Grandstaff VAMC and two associated facilities*

The Mann-Grandstaff VAMC's data center will house Cerner's servers and act as the main computer room. The audit team identified issues with data center infrastructure, including substandard cabling and improper management, inadequate fire sprinkler systems clearance, and the potential for leaks from the facility's cafeteria located above the data center.

Finally, properly controlling operating temperature in telecommunications rooms helps ensure equipment longevity. An OEHRM official stated that increased temperature in the telecommunications rooms when going live was his biggest concern. Installation of additional equipment will increase the rooms' temperatures, requiring more cooling. The interim solution to prevent increased temperatures was to place temporary exhaust fans in rooms, replacing them later with a permanent cooling system. The audit team also found the potential for additional costs by using the temporary exhaust fans only to replace them later with a permanent cooling system.

#### **Critical IT Infrastructure Was Not Upgraded Six Months Before Going Live and Medical Devices May Not Be Able to Connect to the New System**

The audit team also identified deficiencies with the preparedness of IT infrastructure and found the medical center and its associated facilities did not have critical IT infrastructure upgrades completed six months before the March 2020 go live date. For example, as of the week of the audit team's site visit in October 2019, about 31 percent of the needed end-user computing devices had yet to be received. And, as recently as early January 2020, VA had yet to receive about 51 percent of the medical devices needed for going live as well as an approval from DoD to connect the medical devices to the new system.

#### **The Infrastructure Upgrade Schedule Was Likely Unrealistic for the March 2020 Go-Live Date and Could Contribute to Further System Deployment Delays**

Infrastructure upgrades were not completed at the Mann-Grandstaff VAMC in a timely manner to properly prepare for the new EHR deployment primarily because VA lacked

- Comprehensive site assessments to determine a realistic go-live date,
- Requisite specifications for infrastructure and appropriate monitoring mechanisms, and
- Adequate staffing.

The OIG concludes in its upcoming report that VA committed to an aggressive, but likely unrealistic, deployment date of March 2020 without having the necessary

information on the facility's infrastructure. Specifically, on June 26, 2018, VA announced the medical center's go-live date of March 2020; however, it was not until nearly a year later in May 2019 that an assessment was performed identifying physical infrastructure needs. Also concerning is that OEHRM first made infrastructure requirements for physical infrastructure available to VHA at a technical design session in April 2019, just 5 months before the necessary infrastructure was supposed to be ready for the go-live event.

In June 2019, OEHRM leaders told Congress that infrastructure upgrades would not be complete before going live and indicated the infrastructure upgrades were not necessary to support the March 2020 go-live event. In addition, as of November 1, 2019, the infrastructure requirements specifications document was still not approved by VHA. While OEHRM, VHA, and OIT share the responsibility for infrastructure readiness upgrades, disagreements on specific standards contributed to delays.

Similarly, for IT infrastructure, the Current State Reviews were completed in July 2018, which first identified the need for end-user device upgrades to support the new system.<sup>11</sup> This gave VA about 14 months (until September 2019) to achieve its goal for the completion of IT infrastructure upgrades. This was about eight fewer months than the approximately 22 months the OEHRM Infrastructure Readiness Planner estimated that it takes from the time the need for a device is identified to delivery to an end user. Also, VA did not begin procuring end-user devices until April 2019, leaving only about five months for delivery to the Mann-Grandstaff VAMC and for the actions needed for end-user readiness such as configuring. Finally, it is evident that VA needed more time than allotted to complete actions necessary for receiving approval from DoD for the authority to have medical devices connect to the new system.

Despite OEHRM's Executive Director confirming to OIG staff in November 2019 the criticality of infrastructure upgrades being completed six months prior to the go-live date, it is evident that OEHRM and VHA personnel knew that physical and IT infrastructure upgrades could not be completed within this timeframe. Therefore, the infrastructure schedule that was developed was unrealistic.

#### **Management Controls Were Lacking and Key Staffing Positions Were Vacant**

VA lacked some management controls needed to effectively monitor infrastructure readiness at the Mann-Grandstaff VAMC. For example, the OEHRM internal tracking tool was not put into use until June 2019, only 3 months before VA's goal to have infrastructure upgrades complete. As of November 2019, an OEHRM employee reported that no comprehensive tool existed at the national program level to monitor upgrades to critical patient care medical devices. Although OEHRM was conducting internal briefings that included infrastructure readiness, the lack of a comprehensive, effective tracking mechanism increases the risk that milestones will not be achieved.

The OIG team found VA lacked staff to oversee the program's infrastructure readiness. As of November 2019, four of six staff positions on the infrastructure readiness team were still unfilled, and the infrastructure readiness director position was vacant until filled in August 2019, or about two months before VA's goal of having infrastructure upgrades complete six months prior to the go-live date. Without this dedicated position being filled early in the infrastructure planning process, VA would be less likely to spot potential issues stemming from deficient infrastructure.

Because the second IOC site will not deploy the new EHR until November 2020, the first three waves of site deployment, scheduled to go live in August, October, and November 2020, have also been postponed until 2021. By not having infrastructure ready for the deployment of the new EHR, VA could experience issues like those encountered by DoD and have less time to respond to and correct infrastructure-related deficiencies before deploying the system at future sites. In turn, this could delay advancing VA's goal of improving patient care through the modernization initiative.

#### **Inadequate Safeguarding of Critical Physical Infrastructure at the Mann-Grandstaff VAMC Increases Risks to System Security**

The OIG staff also found, while not directly affecting system deployment, some security vulnerabilities at the Mann-Grandstaff VAMC. Neither Cerner nor VA

<sup>11</sup> Among other reasons, the Current State Reviews were conducted by Cerner to assess gaps in the facility's IT infrastructure and provide VA leaders with finding and recommendations. The Current State Reviews did identify the need for significant IT infrastructure upgrades, such as new computers, monitors, printers, scanners, and bar code readers.

identified these vulnerabilities because their assessments do not call for identification of physical security concerns. A Mann-Grandstaff VAMC employee recognized that damage to physical infrastructure due to unauthorized access could result in campus-wide loss of connectivity and patient care downtime for an extended period.

## CONCLUSION

This Subcommittee and VA have made it a priority to improve VA's IT systems. The OIG's work highlighted in this statement reveals there are still considerable challenges, particularly regarding plans to ensure continued access to timely health care for veterans and incomplete critical physical and IT infrastructure upgrades at the Mann-Grandstaff VAMC and associated facilities. The OIG is committed to providing practical recommendations that flow from our oversight work to help VA deploy the new EHR efficiently and in a manner that improves veterans' experiences. The OIG will continue to monitor aspects of VA's EHRM effort to help realize the improvements sought by Congress and our Nation.

Madam Chair, this concludes my statement. I would be happy to answer any questions you or other members of the Subcommittee may have.

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## Prepared Statement of Travis Dalton

Thank you Chairwoman Lee, Ranking Member Banks, and distinguished members of the committee. My name is Travis Dalton, President of Cerner Government Services.

Thank you for the opportunity to be here, and for your continued engagement and support of the Department of Veterans Affairs' (VA) Electronic Health Record Modernization (EHRM) program.

Cerner is honored to be part of a shared mission to ensure a lifetime of seamless care for our Veterans, Service members and their families.

Transformation at scale is hard. It carries risks and we don't take the challenges lightly. We must deploy to over 1,700 sites, train over 300,000 VA employees, collaborate with DoD to make decisions and interoperate with community providers. Those challenges also represent opportunities.

Under VA's leadership, we have made significant strides on our journey to transform care. We have incorporated commercial practices, lessons learned from DoD, and VA provider-led feedback to ensure user adoption and readiness to meet Veteran needs. We are pleased with our progress.

- VA has come together to establish standardized workflows and designs based on the work of 18 clinical councils, comprised of thousands of providers across VA, and 8 National workshops. This enterprise standardization is a monumental achievement.
- We launched VITAL, a training series to empower super users with the technical and change management skills needed to support the EHR implementation and ongoing success.
- We have migrated 23.5M Veterans health records into the VA environment. This is the first time that historical VA and DoD health data are in the same system.

In the coming months, we will implement a new joint Health Information Exchange (HIE) that will allow interoperable information sharing across VA, DoD and community providers connected to the network. Incredible progress is being made.

We are supportive of the revised go-live schedule and the decision to take additional time for testing and end-user training. We heard the advice from this committee to take the time to get it right and listened to the provider community. The additional time will allow us the opportunity to ensure a successful go-live at Mann-Grandstaff.

This program is truly transformational. By moving from 130 disparate systems to one open, modern, integrated system, we will have the right data, at the right place and time to drive outcomes. We also have access to advanced analytics that will give us the opportunity to better diagnose, treat and prevent chronic diseases; environmental exposures; suicide and PTSD; and opioid abuse.

Healthcare's highest calling is caring for the men and women who sacrificed in service to our country. Every day we are energized by the passion and commitment in pursuit of this common purpose. On behalf of Cerner, we are humbled and proud to be a part of this effort.

Thank you and I look forward to our discussion today.