ELECTRONIC HEALTH RECORD MODERNIZATION DEEP DIVE: PHARMACY

HEARING

BEFORE THE

SUBCOMMITTEE ON TECHNOLOGY MODERNIZATION

OF THE

COMMITTEE ON VETERANS' AFFAIRS

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED EIGHTEENTH CONGRESS

FIRST SESSION

TUESDAY, MAY 9, 2023

Serial No. 118–12

Printed for the use of the Committee on Veterans' Affairs

Available via http://govinfo.gov

U.S. GOVERNMENT PUBLISHING OFFICE

52–492 WASHINGTON : 2023

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C O N T E N T S

TUESDAY, MAY 9, 2023

ELECTRONIC HEALTH RECORD MODERNIZATION DEEP DIVE: PHARMACY

TUESDAY, MAY 9, 2023

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

The subcommittee met, pursuant to notice, at 3:02 p.m., in room 360, The Capitol, Hon. Matthew M. Rosendale, Sr. (chairman of the subcommittee) presiding.

Present: Representatives Rosendale, Mace, Self, and Cherfilus-McCormick.

Also present: Representatives Balderson and Carey.

OPENING STATEMENT OF MATTHEW M. ROSENDALE, CHAIRMAN

Mr. ROSENDALE. Good afternoon. I would like to bring this subcommittee to order. A great deal has changed since our last hearing. The VA is finally acknowledging that the Oracle Cerner electronic health record system is not fully functional and is not suitable to any other facility.

After nearly 3 years of pressing forward, despite the mounting consequences to veterans' safety, staff burnout and billions of dollars wasted, Secretary McDonough and Dr. Evans have become realistic about the future of this ill-conceived project. That is encouraging. It has been painful and very expensive to watch this disaster unfold. It has been frustrating to argue and plead with VA not to march off the cliff, only to be ignored or stonewalled.

Thankfully, the Department is now listening to what veterans, it is on employees, and this committee have been saying for so long. It is far past time to look under the hood of the Electronic Health Record (EHR) and see if it can be fixed and whether progress is even being made. Be assured, that is exactly what we are about to do. We are here today to take an in-depth look at one particularly dysfunctional aspect of the EHR and that is pharmacy.

Pharmacy is crucial to veterans' health and well-being. Unfortunately, it is one the most error ridden and dangerous parts of the system. First and foremost, we need to listen to the VA pharmacists who use it every day. To that end, the subcommittee sent questionnaires to each of the five medical centers using Oracle Cerner. We received responses from Spokane, Walla Walla, Columbus and Roseburg.

The situation they describe is outrageous and dangerous. The pharmacists cannot trust the system so they have to work in a con-

stant State of hypervigilance. The Spokane medical center has been live on Oracle Cerner EHR for 2–1/2 years. Yet, they continue to discover new problems every week.

Across these sites patient safety reports are up over 300 percent since the EHR went live. About a quarter of these incidents are directly related to pharmacy. The medical centers have added on average of 20 percent more pharmacy employees to perform the same workload on top of relying on support from remote pharmacists.

Columbus even had to dedicate a pharmacist to manage the Cerner help desk tickets full time. They created a management position in the pharmacy just to deal with the EHR. All together the pharmacy operations at Spokane, Walla Walla and Columbus have seen a more than $9 million deficit from increased staffing costs and lost copays and collections. On average, the staff's struggles with the EHR have shaved about 22 points off of these medical center scores in the best places to work survey.

The pharmacists are in distress and they do not feel their concerns are being taken seriously. That is deeply unfortunate because they, not the VA central office, not Cerner, have been doing the crucial work to document the system's flaws since the very beginning. It was the Spokane pharmacists who wrote the initial 57-page patient safety domain report in August 2021.

It was the pharmacists at these medical centers who identified the 79 business requirement change requests and continue to track them. Some of their findings went into the improvement sprint report that Dr. Evans' office released in March but appears that much more was excluded.

Oracle Cerner released pharmacy updates in February and late April and another one is slated for August. The pharmacists believe some of these updates have been successful and produced incremental improvements. As for the more significant updates, they seem to have created as many new complications as they even resolved.

VA and Oracle Cerner are barely scratching the surface, tackling only a handful the high priority issues from a list that is approaching 100.

I appreciate all of our witnesses joining us today so we can dig into these pharmacy updates and their trajectory for improvement. We expect the VA pharmacists to give our veterans world class service and we owe them fully functional technology to do that.

With that, I would yield 5 minutes to Ranking Member Cherfilus-McCormick for her opening statement.

OPENING STATEMENT OF SHEILA CHERFILUS-MCCORMICK, RANKING MEMBER

Ms. CHERFILUS-MCCORMICK. Thank you, Mr. Chairman. Thank you to our witnesses for being here today to discuss the critical project at the Department of Veterans Affairs. I want to start off by saying that I wholeheartedly support the VA's decision to delay any further go lives while they fix the issue at five sites currently live on he Cerner system.

I am a cosponsor along with Chairman Bost and Ranking Member Takano on the Electronic Health Record Program Restructure, Enhance, Strengthen, and Empower Technology (EHR RESET) Act.

I look forward to working with my colleagues to ensure that we do not go live at any future sites until we fix the issue in this system. These sites have born the brunt VA's to properly manage this project from the very beginning and we owe them our focus.

That being said, I have a number of concerns with the delay. VA has not provided the committee a timeline for when they expect the work to be completed at the live sites. I am also very concerned that the VA has still not established a baseline EHR. Without a baseline, every future go live will bring more changes to the system.

Constant change requests have and will continue to have major impact on the cost and timeline the project and will force staff at the active sites to continually adjust their workflows. I have already heard from the staff that they feel like they are being repeatedly bashed into rocks by the waves of change. The change fatigue associated with constant adjustment is detrimental to staff morale and will have lasting effects on the VA's ability to recruit and retain high quality staff and by extension on the veterans' access to health care.

The VA much shore up its governance process to ensure that any changes to the system are both necessary and the best interest of our veterans and VA providers. Electronic Health Record Modernization (EHRM) cannot be allowed to go the way of Veterans Health Information Systems and Technology Architecture (VistA) where every faculty is operating a different system.

We hear frequently from the VA employees and they continue to feel like their concerns are not being addressed and are bothered by the lack of information on the path forward. Communication with frontline staff must improve in VA if VA expects them to adopt the change.

Also, there must be more emphasis on empowering employees in the decisionmaking process and having their issues fixed faster. There is an entire workforce at VA informatics that are being underutilized.

In this project that could be empowered to manage local configuration changes which would drastically improve the timeline of these needs. I think this would also go a long way toward improving user satisfaction.

Finally, I want to address recent reports of patient harm caused by the new EHR. I have spent much of my career in healthcare and I understand that it is not as simple as saying Cerner hurts veterans. However, the fact is that the EHR did play at least some role in these tragic incidences. I hope that both the VA and Oracle Cerner are looking at the system and the work flows and the policy of proactively identifying areas where there is potential for patient harm instead of reactively patching these places where harm has already occurred.

On a more positive note, I am cautiously optimistic that the new leadership team has made progress in the short time that they have been in place.

The attitude and experience of Dr. Evans has brought to his role is refreshing. I am encouraged that the VA has chosen a practicing physician from the system to help turn the system around. Dr. Evans, your work—Dr. Evans, you and your work are cut out for

you. I look forward today to that conversation. I am encouraged to hear from everybody on how we can help make this EHR a reality for all of our VAs. Thank you so much.

I yield back to you, Mr. Chairman.

Mr. ROSENDALE. Thank you so much, Ranking Member Cherfilus-McCormick.

I will now introduce the witnesses on our first and only panel today. First from the Department of Veterans' Affairs we have Dr. Neil Evans, acting executive director of the Electronic Health Record Modernization Integration Office. We also have Dr. Thomas Emmendorfer, the executive director of the pharmacy benefits management services and Dr. Robert Silverman, the chairman of the EHRM pharmacy council.

Next we have from Oracle Mr. Sicilia, executive vice president for global industries and Dr. James Ellzy, vice president for Federal Health. Finally we have Ms. Carol Harris, the director of information technology and cybersecurity at the Government Accountability Office.

I ask the witnesses to please stand and raise your right-hands.

[Witnesses sworn.]

Mr. ROSENDALE. Thank you. Let the record reflect that all the witnesses have answered in the affirmative.

Dr. Evans, you are now recognized for 5 minutes to deliver your opening statement.

STATEMENT OF NEIL EVANS

Dr. EVANS. Chairman Rosendale, Ranking Member Cherfilus-McCormick, and distinguished members of the subcommittee, thank you for the opportunity to testify in support of the VA's initiative to modernize its electronic health record system.

Today, as mentioned, I am accompanied by my VA colleagues, Dr. Thomas Emmendorfer, executive director of pharmacy benefits management, and Dr. Robert Silverman the pharmacy co-chair of the council, the pharmacy council for Electronic Health Record Modernization.

Before I speak about the impact of our electronic health record modernization efforts and the intersection with VA's pharmacy services, I would like to first spend a few moments discussing our recent decision to halt deployment activities of the Federal electronic health record in VA, as part of the larger program reset. We have been listening to veterans and the VA staff who are using the new electronic health record a the medical centers, VA clinics, and remote supporting locations associated with our health system in Spokane and Walla Walla, Washington, Roseburg and White City, Oregon and Columbus, Ohio.

We have also been listening to Congress, including this subcommittee. The new electronic health record is not meeting our expectations. VA is electing to take the time to get things right.

The program we set follows an extended pause and deployments that began in July 2022, culminating in an effort to assess and address a more narrow set of issues deemed to be the most impactful selected through the lens of patient safety. The VA is already working with Oracle to address the issues identified. Together with Oracle during this reset we will be able to more comprehensively ad-

dress both these issues and a broader set of changes necessary for program success.

Additional deployments will not be scheduled until the VA is confident the new EHR is highly functioning at current sites and is ready to deliver for veterans and VA clinicians at future sites. This readiness will be demonstrated by clear improvements in clinician and veteran experience. Sustained high performance and high reliability of the system itself, improved levels of productivity at sites where the EHR in use and more.

When the reset period concludes, the VA plans to release a new deployment schedule. The only exception to the full stop deployment activities is at the capital James A. Lovell Federal Health Care Center in north Chicago, a fully integrated VA and Department of Defense facility. To ensure that all veterans and servicemembers who are cared for at this facility are covered by one her system deployment activities there will continue with at planned deployment in 2024. That deployment will of course also leverage the improvements made during the concurrent program reset.

I would like to now turn to the focus area of the this hearing, a deep dive into pharmacy and the new electronic health record. The top priority of our pharmacy program at VA is to serve and honor the men and women who are America's veterans by delivering pharmacy programs founded on pillars of safety, quality and value.

In addition, customer service is a hallmark of VA pharmacy services. One example is the consolidated mail out patient pharmacy program that VA runs that provides prescription fulfill to over 350,000 veterans every day. He leads the mail order pharmacy business was validated externally by the annual J.D. Power & Associates national pharmacy studies and has achieved the highest customer satisfaction score in 10 of the last 14 years.

Managing over 146 million total prescriptions a year at VA, pharmacists and pharmacy staff are fully integrated into our care teams as first-class members of the team. The division that exists between the health system and retail pharmacies in the private sector does not exist in VA.

Our pharmacy achieve success by cultivating a culture of continuous improvement. I want to acknowledge and thank our pharmacy community for using the same approach to identify the improvements that are needed in the Oracle Cerner pharmacy system and the electronic health report.

The main concerns identified by our pharmacy community have been related to select acts aspects of an Oracle Cerner pharmacy application called Med Manager retail, as well as its interaction with a core Cerner electronic health record, Cerner Millennium and specifically PowerChart.

A series of development efforts underway by Oracle to improve the visualization of medications for both pharmacists and ordering provider to improve synchronization between Med Manager retail and PowerChart and to improve the efficiency of the work flow for pharmacy staff as they process prescriptions and refills.

Some improvements are recently delivered in a series of software updates over the past few months and the remainder are planned

for delivery between now and February 2024. The feedback from or pharmacy community on the recently deployed enhancements is that the improvements have been small and incremental.

Although these improvements are appreciated, VA pharmacy staff and providers need an accelerated delivery of upgrades to eliminate the burden of the more labor intensive human mitigation strategies that are currently in place. Furthermore, the current pace the new requests for upgrades and enhancements exceeds the delivery schedule of changes to address those requests. This way one of our focus areas during the months to come as we work with Oracle Cerner to optimize and accelerate efforts where possible.

Chairman Rosendale, Ranking Member Cherfilus-McCormick and members of the committee, I thank you again for this opportunity to testify today and for all your continued support of our Nation's veterans and their caregivers.

[THE PREPARED STATEMENT OF NEIL EVANS APPEARS IN THE APPENDIX]

Mr. ROSENDALE. Thank you, Dr. Evans. The written statement of Dr. Evans will be entered into the hearing record.

Mr. Sicilia, you are now recognized for 5 minutes to deliver your opening statement.

STATEMENT OF MIKE SICILIA

Dr. SICILIA. Chairman Rosendale, Ranking Member Cherfilus-McCormick and members of the subcommittee, thank you for inviting us here today. I am joined by Dr. James Ellzy from our Federal EHRM team and we look forward to this discussion about pharmacy capabilities for the new VA EHR.

First, with VA's announcement on April 21 of the reset for the EHRM program I want to State again that Oracle is proud to continue to work together with VA to modernize its EHR system. We support VA's plan to improve the operation of the EHR at the current sites and take the necessary time to institute governance, change management, and standardization changes to ensure the success of future VA deployments, similar to what Department of Defense (DOD) did a few years ago. DOD's modernization is now nearly complete, on time and on budget. We will continue to closely coordinate with VA to provide enhancements and updates to the EHR as we have since we closed our acquisition of Cerner last June. Since then we have made significant progress on many critical issues that were impacting the EHR system, including its pharmacy capabilities. Overall the system performance has significantly improved from where it was last summer.

At the five currently live sites on average more than 200,000 prescriptions are being filled each month. To date 2.8 million prescriptions have been filled through the mail system Consolidated Mail Outpatient Pharmacy (CMOP). When a veteran can send to get a prescription the average window turnaround time across the currently live sites is 25 minutes, which is below the 30-minute key performance metric set by the VA.

The VA's pharmacy system does not operate the same as commercial healthcare systems, as Dr. Evans noted, where the EHR enables a provider to order a prescription but the receiving pharmacy then utilizes its own software for the dispensing of the medi-

cation. In the VA healthcare system VA is both the ordering party and the dispensing party through its own VA pharmacy whether outpatient or by mail. Therefor the her needs to support the supplying components to fill prescriptions. Its fundamental difference is the reason that pharmacy enhancements were needed to tighten the integration between the outpatient pharmacy application and the provider ordering application.

Shortly after the acquisition closed I came to the Hill and met with many Members who were interested in this program. In every single meeting I heard about pharmacy and the need for these enhancements. Members were unhappy that Cerner had provided a timeline of up to 3 years to do the work once VA finally settled on it requirements. That was clearly unacceptable. Once the requirements for the enhancements were delivered to us in VA, by VA in August we built and deployed the top three enhancements to VA in 4 months. There are seven total enhancements and their order was prioritized by the VA.

The remaining four enhancements will be delivered this year for deployment in 2023 and early 2024. That is a significantly faster overall timeframe—timeline. We hope it shows you that the Oracle is a highly, capable partner for VA and whether it is pharmacy enhancements or other fixes we have put tremendous engineering rigor and resources into getting the work done well and quickly.

We have also read the survey results around the recently delivered pharmacy enhancements. We are not completely surprised given the first three enhancements delivered as prioritized by the VA were focused more on improving—ordering provider experience. The next set of enhancements are focused more on improving the pharmacist experience. We believe that once delivered and implemented then pharmacists will be in a position to provide very variable feedback.

One other point about the pharmacy system I would like to highlight is the new opioid adviser tool included with the EHR. This tool allows clinicians to simultaneously check data from 47 State prescription and drug monitoring programs and Department of Defense facilities to prevent improper prescribing in controlled substance.

The opioid adviser tool has automatically alerted providers to avoid prescribing opioids to high-risk patients nearly 1,800 times since November 2020. With the opioid adviser the other modern features of the EHR and the enhancements completed and in process we believe that the pharmacy system will provide a high degree of safety for veterans as they received their medications.

However, we will continue to review it together with VA, especially given the reset period that we are now in. We will continue to work with VA to make sure that enhancements which are forthcoming are delivered on or ahead of schedule. We continue to prioritize our work in pharmacy so that we are confident veterans will receive the cases they need when needed.

Thank you.

[THE PREPARED STATEMENT OF MIKE SICILIA APPEARS IN THE APPENDIX]

Mr. ROSENDALE. Thank you, Mr. Sicilia.

The written statement of Mr. Sicilia will be entered into the hearing record.

Ms. Harris, you are now recognized for 5 minutes to deliver your opening statement.

STATEMENT OF CAROL HARRIS

Ms. HARRIS. Chairman Rosendale, Ranking Member Cherfilus-McCormick, and members of the subcommittee, I am pleased to participate in today's hearing on the pharmacy-related functions of VA's new EHR system.

As requested, I will briefly summarize the findings from our recently completed review of this mission critical system. The results are applicable to the EHRM program as a whole including to the pharmacy-related concerns discussed today. As you know, VA provides healthcare services to roughly 9 million veterans and their families and relies on a legacy system called VistA to do so.

In June 2017, the Department initiated the EHRM program to replace VistA and has obligated at least $9.4 billion on this program to date. This is also VA's fourth attempt at replacing the legacy system and the implementation thus far has been just as challenging as the last three attempts, if not even more so. As such we support VA's recent decision to pause future deployments in order to focus on making improvements at the five sights where the system is currently in use.

In our most recent work, we detailed VA's gaps to effectively manage organizational change as well as the extreme dissatisfaction among users and system issues. This afternoon I will highlight three key points that VA should address during this reset period.

The first is more needs to be done to adequately address VA's organizational change management challenges. Our recent review detailed eight leading practices for change management. VA had partially implemented seven and did not implement one. These gaps occurred for a number of reasons. Most notably, the Department lacked a VA driven strategy for how its efforts would supplement the contractor-led change management activities. As such the activities focused on system deployment, not on user challenges with transitioning to new work flows.

The results of VA's own post-deployment questionnaires highlight the need for more attention for this area. On a scale of zero to 100 with 68 being average, users rated their abilities to use a new EHR system somewhere between 23 and 32. We made seven recommendations to VA to address the gaps in their change management activities.

Now to my second point, users of the new EHR system are generally dissatisfied and this needs to be fully addressed before deployments resume. The VA is well aware that its users are unhappy with the system. Their 2021 and 2022 user satisfaction survey showed this. For example, about 6 percent of users agreed that the system enabled quality care.

Roughly 4 percent of users agreed that the system made them as efficient as possible. I have been auditing for over 20 years now across the Federal Government, these are the lowest scores that I have seen in government, hands down.

With regard to the pharmacy module, users told us processing prescriptions took much longer in the new system, leading to increased backlogs and decreased efficiency which led to patient safety concerns because the pharmacy could not full prescriptions in a timely fashion.

The pharmacy Department at one facility increased from 15 to 60 staff to manage increased workloads associated with the system. There were also multiple instances of double prescriptions and incorrect medication orders and the list goes on.

Furthermore, VA has not established goals to assess user satisfaction. Having such goals in place would provide the department with a basis for determining when satisfaction has improved and also help ensure that the system is not prematurely deployed to additional sites which could risk patient safety. Accordingly, we recommended that VA set these goals and also demonstrate improvement toward meeting them in prior to future system deployments.

Now to my final point. The VA did not adequately identify and address EHRM system issues. The VA has not conducted an independent operational assessment of the new system and as of January did not plan to do so. This critical evaluation performed by a third party would enable VA to systemically catalogue, report on and track resolution of assessment findings with greater rigor transparency and accountability. We recommended that VA make plans to have the independent assessment done.

In summary, the successful implementation of a new system across VA will require a level of program management, adaptability to change and sustained system performance that the department and contractor have yet to demonstrate. Continuance of the EHRM is not without risk but with strong oversight from this committee in addition to improved VA program management and contractor system performance we can increase the odds for success.

Mr. Chairman, that concludes my statement. I look forward to your questions.

[THE PREPARED STATEMENT OF CAROL HARRIS APPEARS IN THE APPENDIX]

Mr. ROSENDALE. Thank you very much, Ms. Harris. The statement of Ms. Harris will be entered into the hearing record.

Before we proceed to questioning I ask unanimous consent from Representative Mike Carey and Troy Balderson to participate when they are able to get here.

Hearing no objection, so ordered.

I now recognize myself for 5 minutes for questioning.

Dr. Evans, are you committed to making the Oracle Cerner pharmacy software and the EHR as a whole fully, functional before restarting any go lives?

Dr. EVANS. Yes. I mean that is—the purpose of our program reset at the highest level is no have a single minded focus on the system improvements. Frankly also the process improvements that are necessary for us to have the confidence that we can move forward with further deployments.

Mr. ROSENDALE. Are you willing to rely upon the input from the directors of the facilities that the system is fully functional in order to account for that recognition.

Dr. EVANS. Yes, absolutely. I just was in Columbus last week meeting with facility leadership in Columbus and I look forward to meeting with the facility leadership of all the facilities that are currently using EHR.

Mr. ROSENDALE. Pharmacy is just one aspect of EHR's problems, but its very important because it directly affects veterans. What is necessary to make the system fully functional?

Dr. EVANS. As was mentioned by Mr. Sicilia, we talk about pharmacy, there are three main stakeholders. There is the ordering provider who is ordering the prescription. There is the pharmacist and pharmacy staff who need to process that prescription and interact with the ordering provider. Then of course there is the veteran who is receiving the prescription. When we talk about the health information technologies that support and effective pharmacy operation, we need to take into account all of those stakeholders.

One of the areas that you heard discussion about in some of the opening remarks here was around supporting the efficiency of pharmacists themselves to be able to safety and effectively do their work, whether that be communicating with the ordering provider or processing prescriptions and refills. At the top level it is that efficiency and quality of processing prescriptions and engaging with veterans that we are measuring the success of this technology to meet our needs in the VA.

Mr. ROSENDALE. Thank you very much.

Mr. Sicilia, you testified to the Senate Veterans' Affairs Committee in March. "We believe from a performance and scalability standpoint the system is ready for the resumption of deployments." 5 weeks later Secretary McDonough halted all future implementations. What is your definition of ready?

Mr. SICILIA. I was referring the to technical readiness of the performance scalability of time. The clinical decisions course belong to the VA.

Mr. ROSENDALE. Clearly you and Secretary McDonough have a different definition of ready could we say?

Mr. SICILIA. I do not believe that the clinical areas of the system are my responsibility. I am not a provider, I am not a doctor. I do not make those decisions.

Mr. ROSENDALE. Okay. The VA has requested budgeted $1.8 billion for Fiscal Year 2024 based upon the old scheduled rollout, which included facilities—10 more facilities. That is been frozen and the original five are not fully functional under the terms of the agreement. I have heard a lot of pledges from Oracle over the last 6, 7 months about standing by their product and being this large institution that is prepared to take this on. The project has never performed as advertised. It has caused so many problems the Secretary has delayed further implementation. You cannot blame that on staff.

Do you think $1.8 billion for Fiscal Year 2024 is fair compensation to Oracle for an EHR system that is not fully functional in the five facilities that it is located in and in the elimination of the 10 that were scrubbed.

Mr. SICILIA. Well. The total amount of money contemplated includes lots of different things, software, plus go live services. Obvi-

ously if the system is not going live we are not going to be compensated for those services.

Mr. ROSENDALE. You would say that the $1.8 billion would be excessive for Oracle to receive for compensation in Fiscal Year 2024 based upon the ten facilities that are not going to be brought on and the five that are not functioning now.

Mr. SICILIA. If we are not going to resume go lives, then sure, that is not going to be—that is not going to be the——

Mr. ROSENDALE. Okay. Do you think it is fair to enter into a new contract and hold taxpayers responsible for a failing system and sites that were never even added onto?

Mr. SICILIA. I would say that the system was core and fundamentally flawed it would not be live at Walter Reed or Ft. Belvoir. By the way we went live at the same time in parallel at sites and the Department of Defense runs the same exact system.

Mr. ROSENDALE. We are not talking about the Department of Defense. In case you did not see the sign on the door—excuse me, Mr. Sicilia. This is the House Veterans' Affairs Committee. Do you think the taxpayers should pay $1.8 billion, which was scheduled for 2024 a bill for 10 facilities that are not even going to be utilized and for the five that are not fully functional?

Mr. SICILIA. No, I do not think that they should because the systems are obviously not going to go live.

Mr. ROSENDALE. Okay. That is fine. Thank you.

I will turn it over to Representative Cherfilus-McCormick for 5 minutes of questioning.

Ms. CHERFILUS-MCCORMICK. Thank you so much, Mr. Chair.

My question is for Dr. Evans. Dr. Evans, how are pharmacy-related patient safety events reported and investigated at the sites using Oracle Cerner?

Dr. EVANS. Any patient safety related concern is reported in the same way, regardless of whether it is really the pharmacy or any other part of care delivery. It is—these are reported by—they can be reported when a user is calling in and reporting a ticket or entering a ticket. They are entered into something called the Joint Patient Safety Reporting system.

Our National Center for Patient Safety, as well as within VA, as well as patient safety experts within the Electronic Health Record Modernization Integration Office, as well as informatics patient safety experts and the Veterans Health Administration take every one of those reports seriously, evaluate what has been reported, investigate the issue and identified solutions to address any findings that are there.

One of the things that is very important is we encourage our end users to report concerns. We would rather have an over reporting of concerns so that we can evaluate the possibility and address items that do prove to have patient safety risk.

The second thing I would say is that—and I think there was a mention of this in comments earlier—a prospective, forward-leaning approach to patient safety is also an important part of this program. That is that as we are configuring the record and improving the record that we are thinking about and evaluating where there might be risk to patient safety in making those decisions on the front end to mitigate or lessen the risk of challenges down the line.

Ms. CHERFILUS-MCCORMICK. Specifically how does the VA leadership receive the results of these investigations?

Dr. EVANS. With regard to if—this is part of our routine management of the system. With regard to—if we are talking about patient safety reports or patient safety concerns there are the changes we need to make to the system, but then there are also if there is a concern that there might have been patient harm our national center for patient safety will do a root cause analysis and we have very regular discussions and meetings with that group to identify what has been fond so that we can take action to improve anything that is necessary within the record.

Ms. CHERFILUS-MCCORMICK. How many actual patient harm events have occurred at the Columbus center that you are aware of?

Dr. EVANS. I would have to take that for the record to give you an exact number.

Ms. CHERFILUS-MCCORMICK. Do you know if any of them or how many if you break it down in ratios were from pharmacy or medical related?

Dr. EVANS. I think when we talk about patient harm, patient harm healthcare can be complicated. It is a complicated—we are orchestrating delivery—a team of individuals taking care of the veteran, imaging studies, orders getting placed, medication. There is a lot that is happening in healthcare. In general, when we look at patient harm, patient harm is almost never singly attributed to an electronic health record. A electronic health record can have a role in patient harm, but it is often one of many facets.

When we think about patient harm, it is hard to say—to answer your question to say how many—how many events of potential patient harm, that is near misses or actual patient harms can be directly and solely attributed to the electronic health record.

Ms. CHERFILUS-MCCORMICK. I guess what I am trying to get at is trying to identify are we really getting the numbers from VA leadership of how many patients are harmed? How can we improve it? That is the specificity that we are looking for. Do you feel like you are getting the real number?

Dr. EVANS. Yes.

Ms. CHERFILUS-MCCORMICK. Have you put together a pathway for improvement?

Dr. EVANS. Yes. I mean, I am seeing the real numbers on a weekly if not daily basis. I am able to review the numbers that are being evaluated. We have a process by which we take the findings of what we learned to make the changes in the system that are necessary to enhance safety.

Ms. CHERFILUS-MCCORMICK. Thank you so much, Dr. Evans. I yield back.

Mr. ROSENDALE. Thank you, Representative Cherfilus-McCormick. I now yield to Representative Self from Texas for 5 minutes.

Mr. SELF. Thank you, Mr. Chairman.

I brought this up in hearings before with the VA, that currently it is not in my district but it is certainly in my area—the Dallas Veterans Integrated Services Networks (VISN),—which I think is the second largest in the system. Even under the VistA system, I hear from veterans all the time that their pharmacy prescriptions

do not arrive, they arrive infrequently, or they have to request them again. It is very interesting to hear the Government Accountability Office (GAO) brief that this is a human factor issue. My question is how does—and we will get to VistA in just a second—this may be for Dr. Emmendorfer, how do prescriptions get filled differently under Oracle Cerner than they do under VistA, because I assume you are using the same pharmacy human factors.

Dr. EMMENDORFER. Thank you, Congressman Self.

Oracle Cerner, there are five Cerner sites the vast majority of the prescriptions are filled with the same pathway as our VA medical facilities. Across the Nation, 84 percent of all our prescriptions go through our mail order pharmacy system.

The difference with our Cerner sites is what you heard from the different folks at the panel today is the increase in staffing for our Cerner sites. For example, in a Cerner site from visiting with our staff it takes approximately three times as long to process a prescription in Cerner. It is our staff's dedication to the mission to care for our Nation's veterans that still insurers we are delivering high quality pharmacy services to our veterans.

To my knowledge, I do not believe that there are significant delays coming from prescription delivery services from our CMOP from our mail order pharmacy whether it is Cerner or from a VistA site. The big issue for our staff, our pharmacy staff is the amount of time it takes to process a prescription to get the medication to the veterans.

Mr. SELF. If there is no difference in method then what is the advantage and what is the value added from Cerner?

Dr. EMMENDORFER. The value added to Cerner is if you look globally at our pharmacy system, we do have elements of our electronic health record system that do need to be modernized. Just to give one example is we do – we have had a requirement going back to the early 2000's where we do need a perpetual inventory system.

A perpetual inventory system would be highly advantageous to our enterprise because that would allow us the ability to have—I could be sitting here in my office and be able to look at the inventory that is on hand across the enterprise.

That would be one advantage regardless of modernization of our electronic health record and how that happens that would be one advantage that we would see in pharmacy.

Mr. SELF. Wow, your testimonies have taken me to a higher level than my questions. I guess I want to drop down to one of my last questions. Is this a matter of will to make this happen, because again, the human factors to me are fascinating. If Oracle says the system itself is ready to go and yet the human factors are not there, that is where we are failing. Is this a matter of the will, because we have heard that its incredibly more expensive to do this system and yet the VA, if I heard the Oracle representative right, is where the human factors have not been taken into account. Is this feasible long-term? Does the VA want to do this?

Dr. EVANS. I think I can help answer that. As Dr. Emmendorfer would say, there are capabilities in the Oracle set of capabilities that have been on our list of things we need to modernize for a long time, perpetual inventory system as an example. A graphical user interface with a modern graphical user interface for pharmacists to

use. Right now pharmacy prescriptions are still processed in what we call a roll-and-scroll interface in VistA.

One of issues that you have heard laid out here is that processing those prescriptions right now is not as efficient for our pharmacy staff in part because we are—there are system improvements that you have heard mentioned that need to be put in place to allow us to deliver that more efficient operation. Right, for the pharmacist. There is a human factor element, but there are—but I would say the majority of this is that we need to adapt the work flows, the how the system works for our frontline pharmacists in processing prescriptions to be more efficient to allow them to return to the same level of workload that they were able to achieve in the VistA system.

Mr. SELF. I yield back, Mr. Chairman.

Mr. ROSENDALE. Thank you, Representative Self. I appreciate that.

Ms. Harris, we heard some testimony about the problem with the clinicians, not the actual software itself and what is going on is clinically related, if you will. We need to look at that a little bit because we are coming up on the renewal period for this contract and I have got major concerns about how that is going to be addressed. If mechanically you have a system that is functioning but the people that are supposed to implement it are not able to do so and it requires additional staffing, it requires workarounds, it has decreased morale because of utilizing this new system to deliver the exact same number of units. While it might be functioning, it clearly is not the people who are delivering the work, if you will.

It is their problem because of something new that has been addressed to them. How do we know if the EHR is fully functional? How are we going to know when it is ready, in your opinion.

Ms. HARRIS. What you just described is not a functioning system. Yes, technically if the system were to work if the users are extremely dissatisfied which is what we are seeing now the system is doing to fail, because it is not sustainable to have workarounds and, you know, ad hoc processes outside of the system it is just not a sustainable solution. There will be increased patient safety risk as a result.

What we have identified through or work is VA lacks set goals for what constitutes a user satisfaction and that is what we need to see. We need to see very clear objective measures for what constitutes adequate user satisfaction. We need to have that defined before and VA needs to demonstrate progress against that before the reset period closes and before they move forward with any future deployments. That is a major issue. Changed management is also another significant issue.

VA lacks a VA-driven strategy for changed management. Oracle Cerner has been doing quite a bit of work in training users in the system itself, but users are not prepared to change their business work flows because they just have not been adequately trained and that is a major issue. The VA needs to take a leadership role in leading that change management effort so that users fully understand the expectations around what—how they are business processes will change.

Mr. ROSENDALE. A real simple question, do you think that this new EHR system that Oracle has rolled out offers either safety, quality or value at this current time?

Ms. HARRIS. No.

Mr. ROSENDALE. Thank you very much.

Dr. Evans, in order to ever have confidence in Oracle Cerner EHR we need to see that it is working well in Spokane, Walla Walla, Columbus, Roseburg and White City. We are a long way from that today. Maybe even more importantly the system has to demonstrate some sort of value to justify the enormous expense. It is not enough to merely swap EHR systems. How are you reevaluating your strategic goal? How will this project ever demonstrate a value proposition?

Dr. EVANS. I wholeheartedly agree that simply changing from one electronic health record to another electronic health record is not strategy for value realization.

The electronic health record is an absolutely critical element of the functioning of the modern healthcare system. It is how one uses the electronic health record, how one configures it, how one enhances its ability to meet your business goals and frankly your customer service goals that delivers the real value.

You know, and example of that is that we operate as an enterprise healthcare system. You know, there are elements of this transition that are actually frankly quite critical for us to meet our strategic goals.

Mr. ROSENDALE. If they are functioning properly.

Dr. EVANS. That is correct.

Mr. ROSENDALE. Okay.

Dr. EVANS. If one of our strategic goals is for us to be able to deliver care across the enterprise. Right now there are tele critical care physicians. There are tele critical hubs that are caring for patients remotely at 20, 30 different VA medical centers. Using VistA they have 20 to 30 instances of VistA open to do that. It would be great for them to have one instance of the electronic health record open to be able to deliver care.

To your point this is where we need to understand what we are trying to achieve strategically to make sure that our investment in the electronic health record is allowing us to achieve those needs.

Mr. ROSENDALE. Thank you, Dr. Evans.

Representative Cherfilus-McCormick. I yield.

Ms. CHERFILUS-MCCORMICK. Thank you, Mr. Chairman.

My question is for Mr. Sicilia. We understand that an issue has arisen with certain medication and allergy information from Oracle sites not transmitting correctly to VistA, VistA providers are receiving a warning to check through the joint longitudinal view whether their patients has received the medication and Oracle site.

If so the provider must check for all allergies and drug interaction problems before prescribing any new medication. Are you aware of this issue.

Mr. SICILIA. I am not personally aware of this issue but I will ask Dr. Ellzy who is a clinician.

Dr. ELLZY. Yes, ma'am. I am aware of the situation and we have actually rectified it for anything going forward. We have come up with a remapping to make sure that what is going back to the

VistA sites is correct. We are still working with the VA to do the retroactive work that needs to be done for thing that were already transmitted.

Ms. CHERFILUS-MCCORMICK. When did you discover that and what was the root cause?

Dr. ELLZY. Ma'am, unfortunately I would have to take that for the record. Thank you.

Ms. CHERFILUS-MCCORMICK. Thank you. My any question is going to be for Dr. Evans. Are you aware of this issue or were you aware of this issue?

Dr. EVANS. I am aware of the issue.

Ms. CHERFILUS-MCCORMICK. What was the mitigation plans that you guys quickly went to before Cerner corrected their plan?

Dr. EVANS. This is an issue that has to do with again I actually would highlight this, it follows on with the theme from Chairman Rosendale, it is important for VA that we operate as an enterprise healthcare system. It is our expectation that if an order—if a medication is ordered at any site that regardless of what site it is ordered at we are doing drug interaction checks, checking for allergies, that we are doing the safe things for the prescription of that medication. With this issue there was an interface bill between the Oracle system and what we call our health data repository, which is where we keep track of prescriptions that have been written from across the enterprise.

When we realized there walls an issue there, we again gave instructions to our end users at our VistA sites for how to find the information they need and we have been working very closely with Oracle to execute the technical fix, which has already been done and now to fix the data that needs to be adjusted in follow up to this event. Again, when we find an issue like this, the answer to your question is it is all hands on deck, all hands on deck to fix it.

Ms. CHERFILUS-MCCORMICK. Well, thank you. I wanted to ensure that we had that communication in the lag time if we can actually make sure that there is not a big lag time because medications with allergies and intermixing is a deadly combination which I am sure everyone here is aware of.

Issues like these have been a concern in the past and of course are going to be a concern going forward for the committee.

The EHR RESET Act would require VA to contract for independent verification and validation of the EHR program. I feel like this is the perfect example of why something like this is needed.

My next question is for Dr. Evans. We understand that these continue to be a problem with veterans addressing reverting to their address in D-E-E-R-S. The question is this issue with Defense Enrollment Eligibility Reporting System (DEERS) was identified shortly after the first go lives, why does it continue to be an issue?

Dr. EVANS. As you are aware, the electronic health record is a Federal electronic health record that is being used by both the Department of Defense and the Department of Veterans Affairs, the United States Coast Guard and soon National Oceanic and Atmospheric Administration (NOAA) as well. DEERS is the identify system used by the Department of Defense.

The system is architected with the dependency on DEERS before VA was an involved with this project. This is an area where we are continuing to work closely with the Department of Defense. In fact, we have meetings scheduled even within the next week and a half at a very senior level addressing issues around some of these points of intersection to include DEERS and its dependency on the system itself.

Ms. CHERFILUS-MCCORMICK. How has this affected the mailing of medication? Are you aware instances where medication was delivered to an incorrect address?

Dr. EVANS. I am not personally aware of that. I will—I do not know whether my pharmacy colleagues can speak to that.

Mr. SILVERMAN. Thank you, Dr. Evans.

Ranking Member Cherfilus-McCormick, I am aware of some the incidents in which medications was mailed to incorrect address as a result of DEERS information being overwritten. It is my understanding that with block 8, which was installed February of this year, the ability for that to overwrite any VA data has been addressed such that if the employees working on the EHR are recognized by the system as VA that it will no longer take DEERS information to overwrite the VA information.

Thank you.

Ms. CHERFILUS-MCCORMICK. Mr. Chairman, I yield back.

Mr. ROSENDALE. Representative Self, I recognize you for 5 minutes of questioning.

Mr. SELF. Thank you, Mr. Chairman.

I want to go to the drop in average scores of best places to work. These are dramatic as the GAO briefed. Did you see similar drops in locations that were VistA only? What I am trying to get at is that are there other factors or can we point to Cerner alone?

Dr. EVANS. I have not done that analysis with the level of detail where I feel confident that I could answer that question. However, I have read the reports from the pharmacy and those numbers with regard to what the process are reporting at these sites are compelling. I would agree.

Mr. SELF. Okay. Then the next question is once something gets engrained in a psyche of your organization, it is going to be hard to overturn. Are you confident that you can overturn these numbers, because believe you me across the VA system people knows these numbers as well as we do. Will you be able to recover regardless of how well you do in your human factor advantages now that you are assuring us that you are going to put this into place? Can you recover from the deep engrained dissatisfaction in your five Cerner sites?

Dr. EVANS. As Ms. Harris testified, it is not without risk as we move forward, but I think so. When we——

Mr. SELF. Why?

Dr. EVANS. Well, when we think about what motivates VA healthcare providers, I am one, I am a primary care provider, what matters to me is not the EHR but how the EHR let is me take care of my patients. What drives the heart and motivation of VA healthcare providers and pharmacists who are healthcare providers, but really all of those of us who come to work every day to take care of patients in VA is taking care of the veteran.

It is the delivery of healthcare, that is what we do. The EHR needs to enable that. When, you know, I believe that if the EHR is performing technically at the level that it should, that is it is consistently up with the capabilities are working in the system and that it is performing quickly from a reliability standpoint, there are no hangs, crashes, lags.

When users see changes in the system that start to increase their confidence that the system is going to be there. Frankly it is going to get out of the way and let them take care of the veterans that come to work to take care of that day. When they start to see improved efficiency in using that EHR to get back to talking to the veteran, they—that is what will drive change, that is what drives using confidence. Confidence in a tool occurs when that tool is something that is fit for purpose, when it does what I want it to do.

Mr. SELF. That is great, doctor, but you now have ingrained a deep dissatisfaction with it. I see my time is going to close real fast here, so I will say you look for new systems, you look at cost, time to implement and productivity. I have not heard a single positive out of this system in the several briefings that I have been in. I think you need to examine that real carefully, can you recover? It is simple as that.

Mr. Chairman, I yield back.

Mr. ROSENDALE. Thank you, Representative Self.

I yield 5 minutes to Representative Balderson for questioning.

Mr. BALDERSON. I thank you, Mr. Chairman for allowing me to ask questions today. Thank you all for being here.

My first question is for Dr. Evans. Sir, it has been abundantly clear for about a year that the EHR system is unsafe and has undermined healthcare delivery operations and morale in Columbus. I heard this from employees and veterans at Chalmers P. Wylie Veterans Outpatient Clinic when I toured last fall. Unfortunately, it sounds like Washington and Oregon are experiencing the same issues.

I understand you have been there and heard the same concerns I have heard. If your improvement efforts are successful, what should we expect to see at Chalmers and elsewhere?

Dr. EVANS. In fact, I was there just this past Tuesday. I am incredibly grateful for the leadership and the frontline staff in Columbus. They are leaning forward and have been doing what—you know, have been raising their hands and pointing out the issues that we need to fix.

A major part of the program reset is listening to our end users and more rapidly addressing the issues. As I mentioned before, what is the path to improvement? System reliability, increased efficiency in using the system, a better configuration that will allow improvements in the configuration, and, you know, regular close-loop communications around improvements.

That is what we are committed to do with all of our sites as part of this reset.

Mr. BALDERSON. Okay. Thank you.

The next couple of questions I have are for anybody, and if you want me to directly ask somebody, I can do that, but if anybody would like to speak up, it is for any witness here today.

We have heard from pharmacists in Columbus that there have been over 730 Cerner help desk tickets logged, averaging over three tickets per day for each pharmacist. Just keeping track of the help desk tickets is literally someone's full-time job. How do you justify the sheer administrative burden that has been placed on the facility?

Dr. SILVERMAN. Good afternoon, Congressman Balderson.

As you heard, I am co-chair for the pharmacy council. My co-chair, Dr. Ladue, and I are aware of the volume of tickets, and, in fact, it is part of our recommendation for there to be a staff member of the pharmacy who is focused on addressing those tickets and being able to centrally be aware of them; and part of that is how the interaction plays between the reporting staff at the pharmacy and the help desk staff by Oracle Cerner that receive those.

We actually find that it is advantageous to have one person or a manager of staff that are aware of those issues in order to avoid the undesirable impact of two people reporting a ticket of similar issue and then having two tickets being worked concurrently with potentially not even the same results on that.

We would like to give some appreciation to the Electronic Health Record Modernization -Integration Office (EHRM-IO) office for the funds that will allow Dr. Emmendorfer and myself to travel to Columbus tomorrow, in fact, for an ongoing discovery visit. Their team is already in place there this week to learn and continue to address these issues.

I have no concern about if there need to be tickets reported, we want that. We want to be accessible. We want to be approachable about that, and then the tickets need to be addressed to resolution.

Thank you.

Mr. BALDERSON. All right. Thank you.

My next question, again, is for anybody, and it is the pharmacy piece, too. Maybe you just want to continue on, Dr. Silverman.

They had to increase staffing by 20 percent. I mean, this is pretty much what you just said. I am down to 40 seconds. I appreciate you all being here, and I thank you for answering the last question pretty thorough.

Mr. Chairman, I yield back my remaining time.

Mr. ROSENDALE. Thank you very much, Representative Balderson.

Dr. Evans, I believe, I really do believe that the physicians and the folks that are delivering the health care to the veterans really do have a mission, a goal, and a life's goal of making sure they deliver top quality health care to our veterans. I really do believe that.

To use an analogy, if you are given new tools, and somebody comes out and gives you a chain saw, and you are a lumberjack, and he does not give you any gas, okay, you are better off using the handsaw that you used to have. You will actually be able to cut more wood than to sit there and try to make that chain drag across the log. Okay?

This question is for—we are going to start with Dr. Silverman. I am going to read you a quote from one of the questionnaires: The Mann-Grandstaff VA has been live on Cerner for 2 1/2 years, yet we all continue to discover new problems weekly. The 79 change

requests referenced earlier was a starting point; however, it is critical to note that many more issues have been identified since that time, and a list of change requests continues to grow at a rate outpacing that of resolutions being implemented, end of quote.

How could there be this many problems in just one area of the EHR? How could the software be this ill-suited for the pharmacists' needs?

Dr. SILVERMAN. Thank you for that question, Chairman Rosendale.

As you heard in the opening testimony, the pharmacy solution that is part of the Millennium software is med manager retail. It is designed for the traditional workflow in which the prescriptions are sent to the pharmacy. They are processed by the pharmacy and dispensed to the patient.

Because VA pharmacy operates on this very tight-knit, closed-circuit operation of pharmacy interaction with the prescribers. It is important to us to have that synchronization between the systems so that the activities of the pharmacist are then reflected in the PowerChart, the prescribers application.

That is among those type priorities that you have heard referenced for what we are seeking to work with, is the ability for our pharmacy dispensing activities to show up in the ordering profile.

Mr. ROSENDALE. If they are working that closely, which is out of the ordinary from what you see in a typical setting in the public sector, why would not it be easier to get this sorted out instead of it being more difficult?

Dr. SILVERMAN. For that, I would give an opportunity for—our partners from Oracle Cerner would like to comment as well about what it would take to synchronize the pharmacy and prescriber systems.

Dr. ELLZY. Chairman, if I understood your question correctly, we had about 500 prioritized—or 500 things that needed to be changed in the system. My pharmacist sat down with the VA pharmacist to say: What is the top priority? They came up with about 10 to say these are the first 10 we need to go after.

It is not necessarily the fastest 10. These are the prioritized 10, and that is the ones we went after that turned into the seven projects that you have seen outlined where three already went live. We have more—one that went in the cube, or in block, and the next block and the block after block 10.

That was because that is what VA prioritized as the most important to them to go after, not necessarily can you tell us which ones you can do the fastest.

Mr. ROSENDALE. Okay. We are still having these issues. Dr. Ellzy, do you believe the Cerner pharmacy software is satisfactory right now?

Dr. ELLZY. Is it satisfactory to meet all the goals of how the VA practices pharmacy right now? No, it is not.

Mr. ROSENDALE. Mr. Sicilia, you testified to the Senate Veterans' Affairs Committee hearing in March that, quote, "we can achieve quite a bit of this by reconfiguring the system without touching the code, and it can be done relatively quickly. I am talking weeks, not months," end quote.

Does Oracle stand by the decisions you have made about when to rewrite the software code and when to just reconfigure the system?

Mr. SICILIA. Yes. Yes, we do. The pharmacy examples, of which we are not finished, and I think that is the driver for a lot of the dissatisfaction, because of the seven major things that need to be fixed for pharmacy; three have now been delivered. As I said in my opening statement, they are focused on the provider side of a prescription, not the pharmacist side. The next four are focused on pharmacists.

In terms of reconfiguring, my testimony during that hearing was specific to the feedback that I heard in Columbus when I was with Dr. Evans and the rest of—and some of the rest of the team. I heard direct feedback around the workflows in the system, not having anything to do with pharmacy but just general workflows in the system, which the team described to me as being too restrictive, too locked down, and not giving enough, if you will, autonomy at the edge to configure those systems.

I stand by my statement that should the VA choose to make those statements, they are configuration changes that we can make in weeks; not months, not years. The pharmacy piece—the pharmacy piece is a recoding of the—recoding of functioning.

Mr. ROSENDALE. Okay. I am out of time here. I am going to have to move on. Thank you for your comments.

Representative Cherfilus-McCormick.

Ms. CHERFILUS-MCCORMICK. Thank you, Mr. Chairman.

My question is for Dr. Evans.

As I said in my opening, I am concerned about the number of change requests that are still showing up more than 2 years after the first go live. I suspect that the VA's history of allowing the medical facilities to operate independently of each other has made this program complicated.

What is the status of establishing a baseline EHR that all facilities would expect to adopt?

Dr. EVANS. There are many layers to that question. I think first one of the places where we do have opportunity is in the devices and capabilities that connect to the electronic health record. Again, in order to deliver a comprehensive solution that allows us to have the technology necessary to deliver the safe, high quality health care that we expect to deliver in the VA, we need more than just an electronic health record.

We need bedside monitors in the Intensive Care Unit (ICU). We need an intravenous pumps. We need laboratory equipment, radiologic systems, what we call Picture Archiving and Communication (PAC) systems, for reading imaging; and many of those buying decisions have been made at the local level traditionally because the interface of that system only had to be plugged into the local instance of our electronic health record, Computerized Patient Record System (CPRS) or VistA.

As we move forward with an enterprise health care system, every one of those additional systems bears a cost for us, as we have to interface it with the Federal electronic health record. That is not technology that Oracle brings to the table. These are technologies

that we are buying to be able to run our gastroenterology suites, et cetera.

We are working to establish a baseline, and we are close, of what we believe would be the capabilities that—for which we have existing interfaces so that plugging them into the electronic health record is easier and faster as we move forward with deployments.

The second part of the question is about a baseline around workflows. How do you run a primary care clinic? How do you do preoperative care? How do you take care of somebody after an operation? What are the—what should the screens show? What are the questions we are going to ask nurses or clinicians to answer?

That is work that our councils assist us with and that, frankly, the voice of the field is incredibly—of our end users is incredibly important because we do need to increasingly standardize what that looks like, but it needs to be a standard that is workable from an efficiency standpoint in the delivery of health care. Both of those areas are significant areas of focus as we engage in the reset.

Ms. CHERFILUS-MCCORMICK. Presently, how have you evaluated workflow and practices across the enterprise to ensure that the baseline meets everyone's needs?

Dr. EVANS. One of the ways we do that is through the clinical councils. We have just recently made changes to how we organize the clinical councils. The clinical councils are now a part of the Veterans Health Administration. We actually have a co-chair here. All of the councils are now co-chaired, including field representation, and they all include existing users of the new modernized EHR.

In part, what we need to do is make sure we have the voices of—representing end users across the system in making those standardized decisions. We are still learning, but this is an area where I think we are seeing—we are seeing positive movement in the right direction.

Ms. CHERFILUS-MCCORMICK. Ms. Harris, do you have anything to add to this when it comes to the baseline EHR?

Ms. HARRIS. I think that that is—establishing a baseline is critical if you are intending to standardize across an enterprise, especially one as complicated as VA.

I think what I would like to note is that it is very important that—increased rate at which Cerner addresses these issues. I know, Mr. Chairman, you had mentioned the 79 business change requests. I mean, to date—I mean, that was 2 1/2 years ago. The list is growing. Only six have been completed. That is a major issue.

The rate at which these issues are addressed need to—I mean, Cerner needs to step up, as well as VA in terms of their program management and contractor oversight as well.

Collectively, yes, the baseline is incredibly important. Getting those user satisfaction scores to increase as well is really critical to recovering from where we are today.

Ms. CHERFILUS-MCCORMICK. Mr. Chairman, I yield back.

Mr. ROSENDALE. Thank you.

Representative Self.

Mr. SELF. Thank you, Mr. Chairman.

Mr. Sicilia, before I go on, I think I have heard you say twice that it is not the pharmacists; it is the supply system. Is that layman's terms?

Mr. SICILIA. The initial focus of the enhancement has been on the provider side. In other words, the person ordering the pharmacy not—we have not yet delivered enhancements that pharmacists of the VA will consume. That is the next block of delivery.

Mr. SELF. Got it. Now I understand what you were saying.

There is a quote from one of your pharmacists: The increased risks due to delays, inefficiencies, vulnerabilities, manual workarounds, and the lack of responsiveness from Cerner to identify patient risks, pharmacy staff must remain in a constant state of hypervigilance to recognize and intervene on those risks.

Hypervigilance by the pharmacists, can you comment on that, because while this pharmacist used the word "Cerner," there are many factors. Address those concerns for me.

Mr. SICILIA. I would appreciate Dr. Ellzy's comments since he deals with the clinicians.

Dr. ELLZY. Hypervigilance in pharmacy. Pharmacists are—I am trying to find the PC way of saying it. They are very much attention to detail-oriented when it comes to pharmacy, filling medications. They want to make sure every I is dotted twice and every T is crossed twice.

When you talk about hypervigilance and a pharmacist, that is somewhat the norm. They are——

Mr. SELF. Well, Doctor, that is not what this pharmacist is saying. We are talking about staff burnout here under the new system.

Dr. ELLZY. Sorry, sir. I do not understand your question to me, though.

Mr. SELF. The question is: Why do they think they have to be hypervigilant under the Cerner system, as opposed to the VistA system? Back to Dr. Ellzy's point, I, too, am a veteran, and what I am hearing from the veterans is they are not getting good pharmacy support under Cerner or VistA.

That is my question to you. Why do they have to be hypervigilant under Cerner even more than VistA if what I am hearing is VistA does not work that well either?

Dr. ELLZY. Sir, from my standpoint of where I sit, whenever you change systems, you are going to not be as comfortable as the system you have been working in for decades. It is going to take time to learn the new system.

Mr. SELF. Okay.

Dr. ELLZY. 2 years is not enough time to get comfortable in the pharmacy sphere with a new system.

Mr. SELF. Okay. Do you all have numbers as to the VistA errors versus the Cerner errors on system-wide pharmacy errors?

Dr. EMMENDORFER. Congressman Self, I do not have those errors in front of me, but if I may just follow up a little bit on the question that was just asked——

Mr. SELF. Certainly. Go ahead.

Dr. EMMENDORFER [continuing]. from a VA pharmacy perspective?

Mr. SELF. Please.

Dr. EMMENDORFER. VA—pharmacists, in general, should not be operating in a state of hypervigilance. We should be operating within our well-established processes and procedures to safely deliver prescription fulfillment services.

I've been a VA pharmacist for over 26 years, and I have used our electronic health record over a portion of that career, and I was—felt very safe and comfortable and not in a state of hypervigilance.

VA takes a lot of pride in pharmacy, in what we do. We have a very dedicated staff to the mission of our agency, which is to care and serve our Nation's veterans, and that I just want to say that I am very grateful for.

In regards to your question about the rates between VistA and Cerner and the error rates, that is something I would have to take back for the record, unless somebody else have those rates in front of them.

Mr. SELF. I would like to hear that.

Ms. Harris, do you have anything to add?

Ms. HARRIS. Well, the main thing that I want to add is going back to your original question, which I think is so important, which is: How do you recover?

In this particular situation, with where we are today with the Cerner system or the new EHR system, implementing our 10 recommendations that we have open relative to increasing user satisfaction, I mean, it is incredibly important that VA establish goals to assess user satisfaction, number one. That is the most important thing that they need to do and demonstrate radical improvement before they move forward with future deployments.

The second thing is to have VA really take ownership of the change management strategy because all these things that we are dealing with today, yes, there are system performance issues, but, for the most part, it is so largely driven by that human component where users have to understand exactly what it is that they need to do in this new, changed environment. That is really difficult to do.

VA needs to take that leadership role in getting their users to be comfortable in this new environment.

Mr. SELF. If the chairman will indulge me for one quick question?

Do you have a recommendation? Can they do this?

Ms. HARRIS. I think that they can do this with very close scrutiny and oversight from this committee. I think—as well as through just really increased performance by both Oracle Cerner, as well as through—as well as with VA as well.

Honestly, I was very disappointed to hear that while VA has concurred with our recommendations, they expect to complete the implementation of our recommendations by October 2023. That is 5 months away. To me, that suggests that they are unserious about our recommendations and what it is going to take to implement it.

If they do effectively implement them, I think they are going to be in a much better footing for success.

Mr. SELF. Thank you.

Mr. Chairman, I yield back.

Mr. ROSENDALE. Thank you, Representative.

Ms. Harris, while you have the microphone hot there, do you think that it is too much to expect someone that has a new system that is supposed to improve their output to be able to learn it, understand it, and be able to deliver it in 2 1/2 years?

Ms. HARRIS. Sir, based on the current management of the system, I think that 2 1/2 years is not enough time. I think that it is going to take a much longer runway for VA to change their culture.

I mean, we have 130 different versions of VistA. The users at these different medical facilities are used to doing business in a certain way that is tailored to their facilities, and standardizing across the enterprise is going to be a very challenging thing.

Again, it takes VA senior leadership to really ensure that the change management is done and done properly where users feel—where users are in a better position to understand what they need to do in this new system.

Mr. ROSENDALE. Dr. Silverman, turning to the April release, it is my understanding that it is supposed to synchronize PowerChart and the Medication Manager Retail, MMR, by automatically deleting prescription records in one system and creating them in another, eliminating the time-consuming double entry process.

Can you explain how this works and what it entails?

Dr. SILVERMAN. Yes. Thank you, Congressman.

The intended synchronization from enhancement 3B is for when the pharmacy at a VA Medical Center dispenses a prescription, it is within common pharmacy practice that there may be some subtle changes of the prescription to dispense and honor the original intent.

Simply put, if you have a prescription for 40 milligrams of a particular drug and the stock available is 20-milligram tablets, we update the directions accordingly, update the quantity accordingly, and dispense.

The intent of that enhancement is to make sure that that information goes from MMR back to PowerChart automatically rather than asking the pharmacist to both make the dispensing process and go to PowerChart to document that update.

Mr. ROSENDALE. Very good.

Is it true that you discovered a serious flaw in this enhancement involving prescription instructions, and you are rolling back the software update?

Dr. SILVERMAN. That is correct.

Mr. ROSENDALE. Dr. Silverman, this was supposed to be the biggest, most important pharmacy improvement. According to the questionnaires, many of the pharmacists were already concerned that it would make what they see in the system even more cluttered and confusing, but it sounds like it blew up right on a launchpad.

Why did this happen? What does it say about EHR's prospects to improve?

Dr. SILVERMAN. Thank you for that.

In terms of why it happened, I would like to assure that the council was in close cooperation with Oracle Cerner on the initial testing, the evaluation in our nonproduction domains, and made

our contribution to the overall decision; yes, let us deploy this with the cube release.

What I believe happened, Congressman, is that what we have not been doing as a VA and what we need to introduce is a longer testing process that would include what I will call end-to-end testing from the prescriber to the pharmacist reviewing that prescription to simulated dispensing of that prescription to our automated equipment.

Because we have not been testing to that thoroughness in an environment that can adequately simulate our production, we did not recognize what would happen with those patient instructions. As soon as that issue was reported, and it was reported through joint patient safety reporting system, as Dr. Evans described, the council moved immediately toward request and recommendation to disable the enhancement to give us the time to analyze it.

Mr. ROSENDALE. Thank you. We appreciate that so that we did not risk anymore safety to our veterans.

Mr. Sicilia, no offense, but do you think that it is fair to use the VA and our Nation's heroes as a testing ground for your products?

Mr. SICILIA. Well, I do not believe that we are.

Mr. ROSENDALE. Well, these are not coming off the shelf, Okay. These are custom products. Do you think it is fair to use the VA and our Nation's heroes as a testing ground for your products?

Mr. SICILIA. We are not universally creating custom products at our discretion. We are instructed and contracted to do so by the VA. As Dr. Silverman just pointed out, there is a testing process that happens so we are not rolling out something that has not been tested and authorized by the Veterans Health Administration (VHA).

In the event that issues are discovered after the rollout, I do think Dr. Silverman's comments are correct. There has to be more end-to-end testing. As something is discovered, we quickly roll it back, as we do.

Mr. ROSENDALE. Thank you.

Representative Cherfilus-McCormick.

Ms. CHERFILUS-MCCORMICK. Thank you, Mr. Chairman.

Back to Ms. Harris.

My question, GAO has an extensive body of work on VA struggles to implement large-scale Information Technology (IT) projects. Specifically, on VA's struggle with program management, can you elaborate on what GAO has observed and what recommendations you have for the VA to be successful?

Ms. HARRIS. Sure.

What we have observed is—I think it stems back to poor project—poor IT project management in general and not having defined user requirements adequately upfront, and, also, not really understanding the—or not having reliable cost and schedule estimates for the—their IT initiatives. Those, in general, have been many of the issues that we have identified with IT programs, such as EHRM.

Now, in this particular case, we have made 15 total recommendations related to the EHRM program. Ten of them are priority and that comes from our most recent work. Again, it goes back to increasing that user dissatisfaction and ensuring that the satisfaction

scores go up, that is critical to the success of EHR, as well as improving their change management, ensuring that their users are adequately trained in how to use the system but also understanding the business process related to the changes and the transformation that is happening enterprise-wide relative to EHR.

Ms. CHERFILUS-MCCORMICK. In your testimony, you stated that contractor change management activities focus on activities required to deploy the system but did not address user challenges when transitioning to new workflow processes.

Is there any reason why VA should continue to focus on and fund training for Oracle Cerner system until they have focused and standardized workflow processes?

Ms. HARRIS. Yes, I think that the priority should—or a significant amount of their effort needs to be paid toward training the users on the new business processes, the new workflows, understanding what they need to do in the new system, as well as understanding, as a whole, what they are expected to do.

I think that at these facilities, I think that they are team players. They want to—I think they want to—and they are on board with changing. It is just that the systems—the EHR system has a significant amount of issues, and, again, Cerner also needs to step up, in addition to VA, in terms of addressing those performance issues.

Again, I will go back to the 79 business change requests. Only six have been addressed in 2 1/2 years. That pace is unacceptable.

Ms. CHERFILUS-MCCORMICK. The EHR Reset Act required that change management activities be led by VA rather than the contractors. Is this consistent with your recommendation? Would this benefit VA long-term to take greater control over the change management activities?

Ms. HARRIS. Absolutely. Having an independent validation and verification of the system post deployment is critical. It is something that we have made a recommendation on so that VA can have a third-party go and take a look and systematically catalog what those issues are and then systematically address those issues.

That is something that is called for by best practice. It is also something that DOD did when they rolled out Military Health System (MHS) Genesis. After their first deployment, they paused the program, did the Independent Verification and Validation (IV&V), and they did not deploy to future sites until they addressed everything related to those issues in that report.

Ms. CHERFILUS-MCCORMICK. Your testimony addresses issues with user satisfaction and VA's lack of established targets. Can you expand on your testimony and let the committee know why not establishing user satisfaction goals is detrimental to the future use of the program?

Ms. HARRIS. Yes, absolutely.

It is hard to tell how much progress has been made if you do not have a baseline established for where you are and where you need to be relative to user satisfaction. You have to have those metrics in place so that you are measuring and being very objective about the progress made and being in a position to show that you have demonstrated adequate improvements before you move forward with future deployments.

Ms. CHERFILUS-MCCORMICK. Thank you so much. Mr. Chairman, I yield back.

Mr. ROSENDALE. Thank you, Representative Cherfilus-McCormick.

Okay. Dr. Evans, we have been hearing about many of the unresolved issues described in the questionnaires for over a year. I am not talking about technicalities. I am talking about things with serious health and safety consequences, like dispensing duplicate medication, refills have failed to be created, and prescriptions that never reach the pharmacy request file.

How are you going to implement these fixes without creating more complications?

Dr. EVANS. Well, first, I think, as you have heard Ms. Harris testify, one of the—we need to balance an increased velocity of delivering these fixes, as well as increased rigor on the testing and understanding of—and prioritization of how we deliver those fixes. That is something that is going to require really tight collaboration between the council, our end users who are using the system and know what it feels like and is every day, Oracle, and the program as we execute this at the larger level.

In part, it is about getting aligned and prioritizing what the most important issues are and then executing those with sufficient velocity. I agree that we are—I do not think we have been executing with the velocity that we need to in order to get where we need to get to have this system functioning in a way that meets VA's needs, where the pharmacy—the pharmacists and the providers are functioning as a single team, reading from the same sheet of music, caring for the same veterans.

Mr. ROSENDALE. Thank you.

Mr. Sicilia, making these enhancements to Oracle's pharmacy software and the EHR in general, I apologize, but it seems similar to constantly patching a leaking roof to me, okay, to the general public. Is the only true solution to scrap the pharmacy modules and buy or build new software?

Mr. SICILIA. I am sorry. I missed the end of that. Buy and build new software?

Mr. ROSENDALE. Is the only true solution to scrap the pharmacy modules and buy or build new software?

Mr. SICILIA. I do not believe so. I mean, I believe, as I said in the beginning, you know, the VA process for pharmacy, as we know, is different than the rest of the world, and we have been working together to build the enhancements. As I said, there are seven main things. Three of them are done. The next for to go. I think it is early in the pharmacy process to judge as to whether or not the end product is not so good.

I am not surprised to hear that right now people do not like it, because it is not complete. It is not finished.

Mr. ROSENDALE. The problem is, though, Mr. Sicilia, is that the taxpayers continue to pay for this experiment, and the veterans continue to pay for this experiment. At what point is Oracle going to either take possession of this obligation, this responsibility that they entered into, that they took on, and to stop laying the responsibility off onto everyone else?

Mr. SICILIA. I do not believe we are laying the responsibility on everybody else. Ten and a half months ago when we took this responsibility, the time—the estimated timeframe to complete the pharmacy enhancements was 3 years. We delivered the first three in 4 months. We will deliver the rest of them this year.

Mr. ROSENDALE. All right.

Dr. Evans, Mr. Sicilia, is this a situation where we can have it good or fast but not both?

Dr. EVANS. I think that is a general—I mean, that is a maxim, in general, right, but I do—I guess I would say I think we are—you know, we are working together to identify what good is. We have had a discussion about that during this hearing.

One of the reasons that together—you know, that the VA announced a reset is to say we need to be able to turn our attention toward these improvements; that is, turn all of our attention to the improvements that are necessary. We are not balancing both the significant effort of preparing for deployments at new facilities and actually executing those deployments with the improvements of the system.

I do believe that there is an opportunity for us, by focusing just on the system improvements, for us to get more people, more talent directed at making the improvements that are necessary faster while preserving quality. I do think there is a path to both good and faster.

Mr. ROSENDALE. Thank you. I appreciate that, but from my standpoint, what I see is some things getting fixed at the top of the list. This creates more problems that then get added to the bottom of the list, and the list continues to get larger.

With that, I will yield to Representative Cherfilus-McCormick.

Ms. CHERFILUS-MCCORMICK. Thank you, Mr. Chairman.

Dr. Evans, earlier when we were talking about baseline EHR, you seemed to indicate that VA was still developing it.

How do you expect to move forward with the program if the baseline has not been establishing? It feels like we are building a plane while flying the plane at the same time.

Dr. EVANS. It is interesting you say that. That is actually in the press release when we announced the reset is exactly what I said, that we are building the plane while we are flying it, and that is one of the reasons we have elected to say let us focus on some of these significant program improvements that are necessary to prepare us for the longer term success of the program.

That is, let us stop flying the plane while also building it. Let us build the plane as it needs to be, and a piece of that is increased clarity around the system baseline to support the delivery of an enterprise system, which is a big change for VA, an important change and a big change.

That is partly what we are doing during the reset is doing that important work.

Ms. CHERFILUS-MCCORMICK. Dr. Evans, in your testimony, you mentioned that go live preparations are ongoing at the Lovell Federal Health Care Center. My question is: Will the system deployed at Lovell be more aligned with DoD's version of Millennium or VA's?

Dr. EVANS. Yes. The James A. Lovell Federal Health Care Center, as you are aware, is a unique facility. It is a fully integrated joint VA and DOD health care facility. The staff there come from both the DOD and the VA, and they operate as a single staff, caring for both veterans, servicemembers, and beneficiaries of the DOD. Their needs are unique.

We—the deployment, the only path forward to a deployment there is a synchronize deployment where we come together with the DOD and the Federal Electronic Health Record Modernization Office in support of the James A. Lovell Federal Health Care System to deliver the capabilities that they need.

We will be looking at what the DOD's workflows are and what the VA's workflows are and are reconciling that to allow us to deliver a single experience to support care delivery at that site.

I do not think I can predict exactly what percentage of DOD-specific workflows will be chosen versus VA or what that hybrid will look like, but what I can say is that we are fully committed to that being an aligned path forward; again, coordinated by the Federal Electronic Health Record Modernization Office with DOD and VA driving the success there at that facility.

Ms. CHERFILUS-MCCORMICK. If the system is not prepared to be rolled out in any other VA facility, why are you planning to deploy there?

Dr. EVANS. By the time we get to the James A. Lovell Federal Health Care Center, the system will have been deployed across the entire Department of Defense health care system, with the exception of the James A. Lovell Federal Health Care System, again, a joint facility.

When we arrive there, the only DOD employees who will not be using the system when we arrive there for the go live, the only DOD employees will be those who are employees of the James A. Lovell Federal Health Care System.

I think first we—it will be a system that is being used across that entire enterprise.

Second, I anticipate we will benefit from this program reset. The scheduled go live is not until 2024. We have numerous months ahead of us that the improvements that we have been talking about here as part of the reset will be able to be delivered in anticipation of that go live. We will be adding value to what has been a successful program in the DOD.

Ms. CHERFILUS-MCCORMICK. Ms. Harris, I have a quick question. Do you have any recommendations for the VA before undergoing this go live?

Ms. HARRIS. Yes, I think that taking very seriously the recommendations that we have made is going to be critical. Understanding the user's needs and what Dr. Evans has just laid out I think is going to be very critical for VA. This integration with DOD, ensuring that they are tightly committed, which it sounds, according to Dr. Evans, is going well so far. I think that that is going to be really important.

Again, ensuring that the users understand what it is that they need to do in the new system and adequately training them not just in the system itself but on the new workflows is essential.

Ms. CHERFILUS-MCCORMICK. Thank you, Mr. Chairman. I yield back.

Mr. ROSENDALE. Thank you, Representative Cherfilus-McCormick.

I am glad to recognize Representative Carey. Thank you for joining us.

Mr. CAREY. Thank you. Thank you, Mr. Chairman.

I sent a letter last November after two veterans who were patients at the Columbus VA died. One of the veterans never was—was never—received his antibiotic, and the other was not contacted to reschedule after he had missed an appointment.

Dr. Evans and Dr. Silverman, the VA responded to our letter in February and provided some information. It turns out that the antibiotic was never actually mailed. The tracking number in the system was misleading. The family never knew that they were supposed to pick up the medication.

Can you explain how this happened and how is that being corrected?

Dr. EVANS. Dr. Silverman.

Mr. CAREY. Either one of you.

Dr. SILVERMAN. Thank you.

I am aware of the incident that you described. While I cannot discuss the specifics of the patient case, the root of the information was that a report in the system that identified that tracking number was providing erroneous information. This case identified that, and the report that provided that misinformation has since been corrected.

Mr. CAREY. It is not going to happen again?

Dr. SILVERMAN. That will not happen again.

Mr. CAREY. Let me ask you, in the other veteran case, one of the VA staff was supposed to call and reschedule his appointment. The system was supposed to remind them to do that. Why was there no automated reminder? Absent of that, how do the veterans fall through the cracks in situations like that?

Either one of you.

Dr. SILVERMAN. Dr. Evans, if you do have information. I am not familiar with that particular case.

Dr. EVANS. I am not either. I can say that appointment reminders are an important capability of the electronic health record. They are really an ancillary capability. They are done differently. Sort of the technical solution for appointment reminders with the Oracle record has been different than how we do appointment reminders in VistA; although, we are working to align that back to a single, common approach to appointment reminders.

I would have to take for the record to look into more of the details of the specific case.

Mr. CAREY. I missed a doctor's appointment, not one I really wanted to do anyway, but I missed a doctor's appointment, and I got like five reminders that I missed it, not to mention the five reminders from my wife to tell me that I missed an appointment. I mean, it was very simple. I got emails. I got texts.

It just seemed very odd that there was no follow up on that.

I appreciate it. Thank you, Mr. Chairman.

Mr. ROSENDALE. Thank you, Representative.

I am going to yield to Representative Cherfilus-McCormick for some closing statements now.

Ms. CHERFILUS-MCCORMICK. Thank you, Mr. Chairman.

Thank you, everyone, for your testimony today. I thought we had a productive discussion this afternoon. We spent a lot of time talking about pharmacy issues today, but it is clear to me that these issues are a symptom of something much bigger.

VA has a long history of failure when it comes to IT modernization efforts, and most of those failures are because VA lacks strong program management. VA—with VA's delay of future go lives and EHR Reset Act, I am confident that we can move the needle forward.

Thank you so much, Mr. Chairman. I yield back.

Mr. ROSENDALE. Thank you very much, Representative Cherfilus-McCormick.

I want to thank all our witnesses for appearing today to discuss pharmacy and the future of the electronic health record modernization effort.

You are responsible for the well-being of millions of veterans. As I said in the last hearing, this cannot be a conversation just about IT systems. It has to be a conversation about whether the VA health care is meeting our veterans' needs and what policies and systems support them.

The only honest conclusion is the Oracle Cerner pharmacy software is failing to do that, and that failure stretches far beyond the pharmacy. The worst thing the VA could do is continue down this dead-end road perpetuating the same failed strategy and paying out billions of dollars. That would be incredibly irresponsible.

The contract renegotiation deadline is coming up next week, and I expect to see VA disentangle itself from this monopoly. If there is a continued role for Oracle, it is in using its own resources to improve its products to make the existing Oracle Cerner sites whole.

Today's hearing gives us every indication that many of those products simply are not capable of improving in the timeframe that we need. The VA should cut their losses and move on; otherwise, you are doing nothing more than continuing to march down the same dead-end road and betraying the veterans and the taxpayers that you are supposed to serve.

I want you to think about that very carefully.

Thank you all, again, for your participation in today's hearing.

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

Without objection, so ordered.

This hearing is adjourned.

[Whereupon, at 4:48 p.m., the subcommittee was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF WITNESSES

Prepared Statement of Neil Evans

Good afternoon, Chairman Rosendale, Ranking Member Cherfilus-McCormick and distinguished Members of the Committee. Thank you for the opportunity to testify today in support of VA's initiative to modernize its electronic health record (EHR) system. I am accompanied by VA's senior leaders critical to this initiative, Dr. Mark Upton, Deputy to the Deputy Under Secretary for Health; Dr. Thomas Emmendorfer, Executive Director of the Pharmacy Benefits Management Services; and Dr. Robert Silverman, Veterans Health Administration (VHA) Pharmacy Council Co-Chairman for the Electronic Health Record Modernization (EHRM) Program.

I want to begin by thanking Congress and this Committee for your continued support and your shared commitment to Veterans. Successful deployment of a modern electronic health record (EHR) is essential to the delivery of lifetime world-class health care and benefits for Veterans. In the end, our goal is a unified, seamless, trusted information flow between VA, the Department of Defense (DoD), the U.S. Coast Guard and community providers that will empower Veterans and their families, caregivers and survivors to achieve and sustain health and wellness. Because Veterans are at the center of everything we do, their health and well-being and ensuring they receive the care they have earned is our highest priority.

We readily acknowledge there have been challenges with our efforts to modernize VA's EHR system. On April 21, 2023, VA announced that, as part of a larger program reset, future deployments of the new EHR will be halted while we prioritize improvements at the five sites that currently use the new EHR. The only exception to the full-stop on deployment activities is the Captain James A. Lovell Federal Health Care Center in Chicago, which is the only fully integrated VA and Department of Defense health care system. During this reset, VA will fix the issues with the EHR that were identified during the recent "assess and address" period, continue to listen to Veterans and clinicians about their experience with the EHR, and redirect resources to focus on optimizing the EHR at and on behalf of the sites where it is currently in use: Mann-Grandstaff VA Medical Center (VAMC), Jonathan M. Wainwright Memorial VAMC, Roseburg VA Health Care System, VA Southern Oregon Healthcare System, and VA Central Ohio Health Care System.

VA has an obligation to Veterans and taxpayers to get this right and will take the time needed to do so. We understand the concerns of this Committee regarding the EHR system and its impact on Veterans and the care our health care personnel provide. We are committed to full transparency, and we appreciate your oversight. We look forward to further engagement with you and your staffs to ensure that this modernization is successful. We commit to you that we are working diligently to address identified issues and to implement enhancements and improvements. In delivering world-class health care to Veterans, VA strives to be a High Reliability Organization, and remains committed to a goal of zero patient harm.

EHR Readiness

Based on our recent assessments, including the ongoing "assess and address" period and the Readiness Assessment, VA determined that the new EHR is not yet ready for future deployments. Additional deployments will not be scheduled until VA is confident that the new EHR is highly functioning at current sites and ready to deliver for Veterans and VA clinicians at future sites. This readiness will be demonstrated by measurable improvements in the clinician and Veteran experience; sustained high-performance and high reliability of the system; improved productivity at the sites where the EHR is in use; and more. When these criteria have been met and the reset period concludes, VA will update and release a new deployment schedule and resume deployment activities.

As mentioned earlier, the only exception to the full-stop on deployment activities is at the Captain James A. Lovell Federal Health Care Center in North Chicago, where the new EHR is scheduled to go-live in March 2024. This is a jointly run VA and DoD facility; the EHRM program reset will allow VA to dedicate additional re-

sources to this joint deployment effort, to ensure that after the go-live, all patients who visit this facility will be covered by one common Federal EHR.

VA has always said the EHR will not go live at any site with unresolved or insufficiently mitigated safety-critical findings. We also remain firm in our resolve to continue deployments of the modernized EHR when it is ready. It is important to take the time now to get things right—to provide a strong foundation for an executable deployment schedule as the project proceeds. The continuous focus will be on assessing and remediating any identified issues at live sites and designing for safety and efficiency at future deployment sites.

System Stability and Reliability

Corrective actions within the system data base configuration and the architecture and management of overall set of technologies within the Federal EHR have led to an overall improvement when it comes to complete outages. Entering the month of April 2023, there had not been an outage for 8 months. Unfortunately, there were two outages totaling 294 minutes in April 2023, resulting in EHR system downtime.

Improving system reliability and availability remains a critical VA focus. Cerner is contractually obligated to meet 99.9 percent uptime commitment per measurement period (monthly) for the EHR production system, meaning that the system is functional and available for use. In addition, our immediate target is to achieve at least 95 percent system incident free time, which we define as the percentage of time in which all solutions are functioning as intended for all users. As of April 2023, Cerner has achieved 95 percent or higher system incident free time on 2 months out of the previous 12 months.

Because not all system interruptions are the result of Cerner activity—issues with other systems that connect to the EHR can impact it—VA continues to work with our partners at DoD and the Federal Electronic Health Record Modernization office to reduce downtime with the EHR enclave and connected systems.

VA established a Performance Excellence workgroup in March 2022 to review technical performance issues with Cerner and resolve problems with system stability, reliability and performance. The goal of this workgroup is to remediate identified reliability and performance issues before deployment of the EHR system to additional sites and minimize any disruption to access of care.

Pharmacy and Medication Management

On February 17, 2023, three priority pharmacy enhancements were installed as part of the Block 8 upgrade to the EHR system. These enhancements provide incremental improvements to system usability, improving providers' visibility of available prescriptions, optimizing system options for maintenance medications and expanding details on prescription expiration dates—all of which are necessary to support our health care personnel in delivering Veteran care. Demonstrating the lessons we have learned from the past, these enhancements underwent rigorous testing prior to installation.

The Pharmacy Benefits Management (PBM) program office, in cooperation with the EHRM National Pharmacy Council, continues to work toward additional system upgrades to further improve provider visibility into prescription details. For example, the April 2023 "cube release" included additional pharmacy capabilities and features, reducing the number of clicks and complexity to users sending prescriptions electronically to an outside (non-VA) pharmacy and allowing clinicians to see the actual prescription status of the mail-order pharmacy in the EHR system. This is expected to be followed by the August 2023 Block 9 update, with three more improvements for pharmacy workflow and prescription refill processing. The Pharmacy Council supports our sites already using the new EHR via regular office hours calls and on-station visits and provides recommendations within VHA through the Assistant Under Secretary for Health for Patient Care Services (AUSH-PCS).

Despite this progress, ongoing support and planned future updates, feedback from our pharmacy community on the recently deployed enhancements to the pharmacy solution is that the improvements have been small and incremental. Although these updates are gradually improving the clinician experience, pharmacy staff need an accelerated delivery of upgrades to the new EHR system to eliminate the burden of the labor-intensive human mitigation strategies currently in place. As the current pace of new requests for upgrades and enhancements exceeds the planned delivery schedule of changes that address those requests, the EHRM reset period will allow VA to focus on execution of system updates and systematically resolve key issues before resuming future deployments.

Additional Program Improvements

VA has also made progress in completing implementation of many of the VA Office of Inspector General's (OIG) recommendations for the EHRM program. As of the date of this testimony, 45 of OIG's 68 recommendations are closed, including the final recommendation from the Unknown Queue report that was closed in January 2023. Thirteen (13) additional recommendations are targeted for closure by the end of May 2023. Twenty-three (23) recommendations remain open, including two from the oldest report focused on access to care at Mann-Grandstaff VAMC. These two recommendations relate to evaluating the EHR system's impact on productivity and the impact of mitigation strategies on the user and patient experience and are targeted for closure by June 2023. VA continues to drive each to closure. We have established VHA EHRM governance bodies and processes to ensure enterprise standardization and health system decisionmaking. As part of this work, EHRM-IO transitioned the EHRM National Councils to VHA to be incorporated into VHA's governance process.

Continued Engagement at Live Sites

VA continues active engagement with sites already using the new EHR system, and supporting those sites will be our primary focus as we reset the EHRM program. We are grateful for their hard work and dedication to patient care. In fact, these sites have provided vital feedback on challenges with the new EHR that have resulted in necessary improvements.

For staff at the five sites where the EHR is currently in use, this reset means that we are devoting our resources to improving the EHR experience from the ground up. When EHR systems are at their best, they are intuitive, responsive and reliable. Clinicians should not be waiting for an EHR; it should always be ready for them. All too often, the new EHR has not provided that type of seamless experience for VA staff. We will ensure that the new EHR is delivering for VA clinicians and empowering them to deliver world-class care to Veterans. VA continues to actively work on issues impacting system reliability and usability to include addressing system performance, testing, training and functional optimization.

As we continue to support existing sites, VA has developed and sustained a training regimen to ensure new hires are properly trained and existing users are getting opportunities to optimize their performance in the EHR system. We routinely communicate system changes, planned maintenance events, upgrades and outages. We also leverage our weekly User Impact Series, which is attended by over 200 super users, site and VA leaders, and subject matter experts. The lessons learned from these sites have enabled VA to improve the level of support provided before, during and after go-live.

Contract Update

VA's initial sole source contract award was awarded to Cerner on May 17, 2018. The EHRM Indefinite Delivery/Indefinite Quantity (IDIQ) contract was structured with an initial period of performance of 5 years, after which another 5-year option period is available to exercise at the Government's discretion. The current period of performance for VA's contract ends May 16, 2023. Our Office of Acquisition, Logistics, and Construction, together with other stakeholders in VA, has conducted acquisition planning and preparation to support option period negotiations with Cerner. Those negotiations began on March 13, 2023, and are ongoing. VA and Cerner are currently working toward an amended contract that will increase Cerner's accountability to deliver a high-functioning, high-reliability, world-class EHR system.

Budget Overview and Cost Estimate

The VA EHRM program will not be seeking the 25 percent funding withhold (totaling $439,750,000) of the VA EHRM budget line for FY 2023. As part of the reset, VA remains committed to working with Congress on resource requirements for the agency's EHR Modernization efforts. When the reset period concludes, VA will update its EHR deployment schedule and program life cycle cost estimate and will provide an updated version to Congress once completed.

Conclusion

Our focus is keeping Veterans at the center of everything we do, and our top priority remains and continues to be advancing a culture of safety and high reliability, with the goal of zero incidents of patient harm. Veterans deserve high-quality health care that is timely, safe, Veteran-centric, equitable, evidence-based and efficient.

As improvements continue to be made throughout the duration of this reset, VA will continually evaluate readiness and the EHR system to ensure success. This in-

cludes close collaboration with EHRM-IO, VHA, site and VISN leadership and other key stakeholders.

I again extend my gratitude to Congress for your commitment to serving Veterans with excellence. With your continued oversight and support, VA will realize the full promise of a modern, integrated health record to cultivate the health and well-being of Veterans. We are happy to respond to any questions that you may have.

Prepared Statement of Mike Sicilia

Statement of Mike Sicilia, Executive Vice President, Global Industries
Oracle Corporation

Before the

U.S. House
Committee on Veterans' Affairs
Subcommittee on Technology Modernization

Hearing on

"Electronic Health Record Modernization Deep Dive: Pharmacy"

May 9, 2023

Introduction:
Chairman Rosendale, Ranking Member Cherfilus-McCormick and members of the Subcommittee, thank you for the opportunity to speak with you today about Oracle's work with the Department of Veterans Affairs' (VA) Electronic Health Record Modernization (EHRM) program, specifically the pharmacy capability of the Electronic Health Record (EHR).

I am Mike Sicilia, Executive Vice President for Global Industries at Oracle. I am responsible for the Oracle Health Business Unit, including Oracle Cerner.

I am joined by Dr. James Ellzy, Vice President Federal, Health Executive and Market Leader. Dr. Ellzy knows the EHR modernization project from both VA and the Department of Defense (DoD) perspectives, having previously served at the Defense Health Agency. We are glad to have him on our Oracle Cerner team providing his expertise and knowledge.

It has been nearly one year since Oracle acquired Cerner and assumed its responsibilities under the EHRM contract with VA. In the time since the acquisition's closing, Oracle has made significant progress on many critical issues that were impacting the EHR system. We recounted this work in our 2022 Year-End Congressional Report, and more recently in my testimony to the Senate Committee on Veterans' Affairs in March.

With VA's announcement on April 21, 2023, of a reset for the EHRM program, I want to state again that Oracle is proud to continue working together with VA to modernize its EHR system. We support VA's plan to improve the operation of the EHR at the current sites and take the necessary time to institute governance, change management and standardization changes to ensure the success of future VA deployments, similar to what DoD did a few years ago. DoD's modernization is now nearly complete, on time and on budget.

We will continue to closely coordinate with VA to provide enhancements and updates to the EHR. We appreciate Secretary McDonough's leadership on this project and reiterate our commitment to providing VA and our nation's veterans with an EHR that exceeds expectations.

Pharmacy Toplines:
In June 2022 when Oracle completed its acquisition of Cerner, and I first began meeting with Members of Congress to discuss EHRM, addressing the need for enhancing the EHR's pharmacy capabilities was one of the top things I heard about in meeting after meeting. Some Members of Congress were concerned that the pharmacy enhancements were beyond the scope of what we could do and that perhaps a third party would need to be utilized.

Members were especially concerned because at that time, Cerner had provided estimates of up to three years to complete the enhancements VA was seeking for the pharmacy capability, which clearly was unacceptable.

Every Member of Congress I met with asked us to speed up that timeline. And we did it.

We knew that proving our ability to get these enhancements done well and quickly would be key to establishing a positive relationship with VA for all of the other work that needed to be done, and critical to show EHR users, veterans and Congress that Oracle does what it says it will do.

So, once the requirements for the pharmacy enhancements were delivered to us by VA in August, we built and deployed the top three enhancements to VA in four months.

Again, four months. Not three years.

The remaining four enhancements will be delivered this year for deployment in 2023 and early 2024. That's a significantly faster overall timeline, and this speed is possible because of the engineering rigor Oracle brings to the table as VA's new partner.

And the enhancements delivered thus far are working for providers and improving their ability to get medicine to veterans quickly and accurately.

At the five medical centers live on the new EHR today, veterans are receiving their prescriptions at the same rate as they were prior to the facility converting from VistA.

On average more than 200,000 prescriptions are being filled each month, and to-date 2.8 million prescriptions have been filled through the Consolidated Mail Outpatient Pharmacy (CMOP), which is the top interface in the entire program. Prescriptions are filled at the facility or by mail order, as directed by providers and pharmacists when making the order in the EHR.

When a veteran comes in to get a prescription, the average window turnaround time across the currently live sites is 25 minutes - below the 30 minute key performance metric set by VA. We recognize VA has added additional staff in pharmacy, and we are working with VA on enterprise standards that will help control costs and increase productivity.

One way to control drug costs is the addition of National Prior Authorization, which ensures that all VA Medical Centers in the new EHR are using the same clinical decision-making to adjudicate non-formulary requests. This not only helps save money in the overall health system by reducing the amount of inappropriate high cost, non-formulary approvals when formulary cost-friendly options are available, but also saves money directly related to EHR

modernization costs because this addition only needs to be made once rather than adapting it for 130 instances of VistA.

We also have added filters, as explained in more detail below, to allow VA to filter work and segregate pharmacy labor each day.

In the new Oracle Cerner EHR the function for entering pharmacy orders and managing drug therapy for a patient is referred to as Retail Medication Manager, or MMR. MMR assists with basic tasks, such as identifying a patient, selecting drugs or other pharmacy products, and entering, reviewing, and modifying orders. MMR allows pharmacists to access a dynamic store of clinical, demographic, and therapeutic information about each patient. A provider or pharmacist can check a patient's health status and then implement an individualized drug therapy.

One benefit of the new EHR system is that it integrates relevant data sources into a single provider view. Pharmacists are able to view VA and community care prescriptions in one queue rather than having to go to separate queues for each, as in VistA. Pharmacists see relevant clinical information and lab values – including renal function – face up during the entirety of medication evaluation and processing, a capability that is not present in VistA without leaving the order to go to another screen, which is less efficient.

The results tab embedded into MMR provides a more comprehensive view of the lab results flowsheet. Pharmacists are able to leverage this information to assess labs to ensure veterans with substance use disorders have the appropriate labs completed to assist in prescription drug management. If a veteran being treated with Suboxone for substance use disorder has a positive test in their urinalysis for other opioids, the pharmacist will see that and be able to notify the provider.

The new EHR has medication clinical decision support functions that require pharmacist intervention for drug-drug interaction concerns. Additionally, it sends discern alerts to notify and prompt pharmacists for missing relevant information such as whether the veteran is missing a drug allergy assessment. From that discern alert, the pharmacist can complete that relevant documentation.

Finally, the new EHR allows an outpatient pharmacist to have visibility of medications that were administered during a veteran's inpatient visit. The pharmacist can leverage this during the discharge process to ensure there are not medication gaps as the veteran transitions from inpatient to the next level of care.

All of these features provide a higher degree of safety for veterans as they receive their medications.

Pharmacy Overview:
A typical Oracle Cerner Millennium commercial EHR system contains functionality that enables the ordering of a prescription by the provider; the receiving pharmacy then utilizes its own software for the dispensing of the medication. Our original contract with VA for its EHRM program included these standard Oracle Cerner Millennium pharmacy capabilities.

However, after deployment first in Spokane and later at additional sites in Washington, Oregon and Ohio, it became apparent that the baseline Millennium pharmacy capabilities originally contracted needed to be enhanced to encompass the level of tight integration required to meet VA's Outpatient Pharmacy needs.

In the commercial sector providers utilize the EHR to send prescriptions to the patient's pharmacy of choice – perhaps Walgreens, CVS or a local pharmacy. The commercial health care entity is the ordering party for the prescription, but a separate commercial pharmacy is the dispensing party for the prescription.

In the VA healthcare system, VA is both the ordering party and the dispensing party. Therefore in the VA healthcare system the EHR needs to support the supplying components for filling prescriptions. This fundamental difference is the reason for the pharmacy enhancements to tighten the integration between the outpatient pharmacy application and the provider ordering application.

Pharmacy Updates and Enhancements:
VA has issued two primary Task Orders – Number 31 and Number 52 – for updates and enhancements to the pharmacy capability. The table attached as Appendix 1 summarizes the status of each item.

In addition, Oracle regularly provides EHR system updates including for the pharmacy capability. As part of our product life cycle to enhance our software, Oracle Cerner updated the History action function as a part of the Block 8 upgrade. Pharmacists use this function to access previously prescribed outpatient prescriptions and associated activity to increase efficiencies and inform processes. Before this upgrade, it took an average of 15.3 secs pre-Block 8 and now takes 1 second to execute. This upgrade eliminated the problem for 2,600 users with 40,000 monthly instances.

In total, fourteen stability and performance improvements were added to the outpatient pharmacy application with Block 8. These were done to improve the end user experience and support their workflow and experience.

Block 8 Updates:
In the Block 8 system update in February 2023, three critical pharmacy enhancements from Task Order 52 were made – Numbers 1, 2 and 3a. Additionally, an update from Task Order 31 was made.

Enhancement Number 1: Toggle Prescription Synonym Visibility
This enhancement guides providers to order prescriptions or supplies based on what is formulary and fillable through the VA or its mail system (CMOP). The intent is to reduce re-work efforts needed by pharmacists and providers to adjust prescriptions after the initial order entry, which will mean less re-work if a local VA site cannot fill a prescription. This streamlined the amount of prescriptions a provider sees by almost 50 percent to better provider and pharmacy experience in addition to increasing productivity.

Enhancement Number 2: Optional Order Stop Date in Retail Med Manager
This enhancement allows ongoing medications for a patient to stay on the patient's active medication list even after the legal date has been met and regardless of whether a veteran's prescription was originally ordered within the EHR or from a community care provider. This will ensure providers and pharmacists continue to have better visibility to a veteran's medications even when a new prescription is needed.

Enhancement Number 3a: Display Legal Rx Expiration Date in Orders
This enhancement gives visibility for providers when a prescription is no longer fillable because it is past the legal expiration date, which will help identify when a new prescription is needed and allow for more timely prescription renewals.

It's not uncommon for a veteran to be taking multiple prescriptions and often double digit prescriptions to meet their medical needs. During a provider visit with a veteran, the provider will conduct prescription management to re-order/refill all a veteran's medications to allow them to continue to receive supply from VA. Therefore a legal expiration date of a prescription was needed as this info comes from VA pharmacy.

Task Order 31: E-Rx Monitoring Filling
This enhancement improves the E-Rx Monitor filter. Electronic prescriptions are processed from VA and non-VA providers in the E-Rx Monitor. Filtering the monitor allows for pharmacists to segregate their labor pool daily and have a pharmacist focus on singular aspects of workflow, for example community care prescriptions from a non-VA provider.

Task Order 31: Weekly Multum Release
This enhancement increased the release cadence for Multum content to move from monthly releases to release weekly, allowing for increased delivery of drug content as it is updated.

Overall, these enhancements have improved the productivity levels for end users by enhancing usability between the EHR and other VA specific systems and providing better alignment between work and workflows to prevent the need from navigating between systems for providers and pharmacists to do their jobs.

Spring 2023 Cube Update:
Over the last weekend of April a Cube Update to the system was conducted that included pharmacy enhancement Number 3b.

Enhancement Number 3b: Display Rx Dispensing Details in Power Orders
This enhancement updates the provider's view when a prescription is ordered to reflect how prescriptions are dispensed by the pharmacy to the patient. This change will bring more visibility to situations when a pharmacy is using a different tablet size, for example, to fill a prescription (e.g. Lisinopril 20 mg tablet x 1 tab prescription filled with Lisinopril 10 mg tablet, x 2 tabs).

Block 9 Updates:
In August 2023 the Block 9 system update is expected to include pharmacy enhancements Numbers 4 and 6. We will deliver both updates to VA in May to allow plenty of time for testing and validation.

Enhancement Number 4: Support mCDS Discontinue in Retail Med Manager
This enhancement will reduce the steps or number of clicks pharmacy staff need to take to discontinue duplicate prescriptions within the drug interaction checking (mCDS) alerts window.

Enhancement Number 6: Optional Pharmacist Verification for Pharmacy Technicians Refills
This enhancement will save time for pharmacists by removing pharmacist verification requirements for refills initiated by pharmacy technicians.

Block 10 Updates:
In February 2024 the Block 10 system update is expected to include pharmacy enhancements Numbers 5 and 7 from Task Order 52. Block 10 also is expected to include two updates from Task Order 31. We will deliver these to VA by December 2023 to allow plenty of time for testing and validation.

Enhancement Number 5: Enable Power Orders Renewal Action on Retail Med Manager Prescriptions
This enhancement will allow providers to easily renew and take other actions on outpatient pharmacy generated prescriptions for consistency with provider entered prescriptions.

Enhancement Number 7: Request Refills from Power Chart to Outpatient Pharmacy
This enhancement will allow providers to perform a "right click" refill action in Power Chart and transmit a refill to the pharmacy for processing.

Task Order 31: Three Drug Image
This enhancement will provide drug metadata (round, scored, color, drug ID, imprint) in outpatient pharmacy workflows so that a pharmacy user can accurately identify medications.

Task Order 31: Mobile Inventory Scanning
This enhancement will help monitor and control real-time inventory and reordering processes by assisting with inventory and reorder level updates through mobile scan-driven workflows during a single adjustment step.

Additional Actions:
The EHR's pharmacy capability will continue to be reviewed for improvements. For example, we have received feedback from EHR users who are requesting the "complete" button in the medicine reconciliation workflow be renamed due to it causing confusion, so we are working with VA on a solution. Similarly, as additional feedback comes in from users we will prioritize addressing it.

The pharmacy enhancements, like our work to stabilize overall system performance and quickly fix issues like the Unknown Queue, is emblematic of our approach. When a concern is raised or an enhancement is needed, we put a team on it and get it done.

Opioids:
An important capability of the new EHR is the opioid advisor tool. The new EHR allows clinicians to simultaneously check data from 47 state Prescription Drug Monitoring Programs (PDMP) and Department of Defense facilities to prevent improper prescribing of controlled substances. Previously clinicians had to leave a patient's record and access PDMP data through each state's website with different passwords for each site. The opioid advisor tool has automatically alerted providers to avoid prescribing opioids to high-risk patients nearly 1,800 times since November 2020.

Closing:
As with our overall commitment to delivering VA a new EHR that exceeds expectations, pharmacy is no exception. We will continue to work with VA to make sure that enhancements which are forthcoming are delivered on or ahead of schedule, and we will continue to prioritize our work on pharmacy so that we are all confident veterans will receive the medications they need when needed. Thank you.

Appendix 1 – Table of Pharmacy Enhancements by Task Order

Type	Pharmacy Capability	Description	Client Validation Ready in Non-Prod	Current VA PROD Desktop Upgrade Timing
VA TO 52	#1: Toggle Prescription Synonym Visibility	Guide providers to order prescriptions (or supplies) based on what is preferred through the VA's formulary and more likely to be stocked at the local pharmacy. Intent is to help reduce re-work needed by pharmacists and/or providers to adjust prescriptions after initial order entry and contain costs.	**Complete** Nov 2022	**Live 3/6 (Block 8 Code install)** ~~Block 9: Aug 2023~~
VA TO 52	#2: Optional Order Stop Date in Retail Med Manager	Keep ongoing medications for a patient on the active medication list so providers and pharmacists continue to have easier visibility to the medications even when a new prescription is needed.	**Complete** Nov 2022	**Live with Block 8: Feb 2023** ~~Block 9: Aug 2023~~
VA TO 52	#3A: Display Rx Legal Expiration Date in Orders	Visibility for providers when a prescription is no longer fillable (past legal expiration date), to help identify when a new prescription is needed.	**Complete** Nov 2022	**Live with Block 8: Feb 2023** ~~Block 9: Aug 2023~~
VA TO 52	#3b: Display Rx Dispensing Details in PowerOrders	Update the provider's view of prescriptions to reflect how prescriptions are dispensed by the pharmacy to the patient.	**Complete** Dec 2022	**Live with April 2023 Cube** ~~Block 9: Aug 2023~~
VA TO 52	#4: Support mCDS Discontinue in Retail Med Manager	Reduce steps/clicks for pharmacy staff to discontinue duplicate prescriptions within the drug interaction checking (mCDS) alerts window.	Q2 2023	Block 9: Aug 2023
VA TO 52	#5: Enable PowerOrders Renewal Action on Retail Med Manager Prescriptions	Allow providers to easily Renew and take other actions on Outpatient Pharmacy-generated prescriptions for consistency with provider-entered prescriptions.	Q3 2023	Block 10: Feb 2024
VA TO 52	#6: Optional Pharmacist Verification for Pharm Tech Refills	Increase pharmacist efficiency (save pharmacist time) by removing pharmacist verification requirement for refill initiation entered by pharmacy technicians.	Q2 2023 ~~Q3 2023~~	Block 9: Aug 2023 ~~Block 10: Feb 2024~~
VA TO 52	#7: Request Refills from PowerChart to Outpatient Pharmacy	Provide better service to patients and more efficient by allowing nurses/physicians/other roles as appropriate to initiate a refill request to the pharmacy on behalf of the patient. For example, if the patient says 'I need to get that med refilled' during a clinic visit, the provider can send the refill request to the pharmacy while in the patient's chart, and potentially reduce the wait time for the patient once they arrive at the pharmacy following the visit.	Q4 2023	Block 10: Feb 2024

VA TO 52 Mod6	Override Address Validation	Provide the ability for the pharmacist to override the address validation status for an address that fails the United States Postal Service (USPS) validation.	Q4 2023	Block 10: Feb 2024
VA TO 31	E-Rx Monitor Filtering	Increase pharmacy efficiency by improving work queues used by pharmacy managing provider entered prescription actions	**Complete** Dec 2022	**Live with Block 8: Feb 2023**
VA TO 31	Weekly Multum Release	Increase release cadence for Multum content to move from monthly releases to release weekly, allowing for increased delivery of drug content as content is updated.	**Complete** Dec 2022	**Live as of December 2022**
VA TO 31	Three Drug Image	Enables use of additional drug image sources (e.g. white pill with N 25 imprint) and support up to three images in the Outpatient Pharmacy dispensing verification workflows to visually confirm the right drug is being dispensed.	Q3 2023	Block 10: Feb 2024
VA TO 31	Mobile Inventory Scanning	Provide mobile application for scanning inventory to generate a request/requisition for reordering supplies to increase efficiency of managing the inventory	Q3 2023	Block 10: Feb 2024

Prepared Statement of Carol Harris

United States Government Accountability Office

Testimony

Before the Subcommittee on Technology Modernization, Committee on Veterans' Affairs, House of Representatives

For Release on Delivery
Expected at 3:00 p.m ET
Tuesday, May 9, 2023

ELECTRONIC HEALTH RECORDS

Challenges with VA's New System Call for Management Improvements

Statement of Carol C. Harris, Director,
Information Technology and Cybersecurity

GAO-23-106785

Chairman Rosendale, Ranking Member Cherfilus-McCormick, and Members of the Subcommittee:

I am pleased to participate in today's hearing on pharmacy-related functions of the Department of Veterans Affairs' (VA) new electronic health record (EHR) system.[1] As you know, the department is acquiring this system as part of its Electronic Health Record Modernization (EHRM) program. The use of IT is crucial to helping VA effectively serve the nation's veterans. Specifically, VA uses the Veterans Health Information Systems and Technology Architecture (VistA) to manage health care to its patients, which contains the department's EHR.

In June 2017, VA initiated the EHRM program to replace VistA because it is technically complex, costly to maintain, and does not fully support the department's need to exchange EHRs with other organizations, such as the Department of Defense (DOD) and private health care providers. As a result, VA began to acquire the same Oracle Cerner EHR system DOD had selected. VA has reported obligating about $9.42 billion on EHRM from fiscal year 2018 through the first quarter of fiscal year 2023.

My statement today is based on a recently completed review to determine the extent to which VA has (1) employed organizational change management strategies for the EHRM program consistent with leading practices, (2) assessed users' satisfaction with the new system, and (3) identified and addressed EHR system issues.[2] The results of our review are applicable to the EHRM program as a whole, including to the pharmacy-related concerns that are the focus of today's hearing. Appendix I provides information on our objectives, scope, and methodology.

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

[1]An EHR is a collection of information about the health of an individual and the care provided to that individual, such as patient demographics, medications, and past medical history.

[2]On March 10, 2023, we provided a final briefing on the results of our review to the House and Senate Committees on Appropriations, Subcommittees on Military Construction, Veterans' Affairs, and Related Agencies; House and Senate Committees on Veterans' Affairs; Rep. Jim Banks; and Rep. Susie Lee. We plan to publish the briefing in a May 2023 report.

based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

VA's IT systems provide capabilities to establish and maintain EHRs that health care providers, including pharmacists, and other clinical staff use to view patient information in inpatient, outpatient, and long-term care settings. The department's health information system—VistA—serves an essential role in helping the department to fulfill its health care delivery mission.

However, VistA is technically complex: it is comprised of about 170 clinical, financial, and administrative applications that support health care delivery at more than 1,600 medical facilities. In addition, VA has approximately 130 versions of the system department-wide.

VA is in the process of replacing VistA because it has been in operation for more than 30 years, and as previously mentioned, is costly to maintain, and does not fully support VA's need to electronically exchange health records with other organizations, such as DOD. Toward this end, VA established the EHRM program and contracted with Oracle Cerner to acquire Millennium (the core EHR system) and HealtheIntent (a cloud-based software platform that aggregates health data from multiple data sources to create a longitudinal patient record).[3] VA's contract also includes requirements for Oracle Cerner to:

- conduct reviews and assessments of medical facilities to determine facility needs prior to deployment (e.g., technology infrastructure);
- provide services, including project management, change management, training, and testing; and
- host and deploy EHRM across the VA enterprise.

The EHRM Integration Office (EHRM IO) is the organization within VA that is responsible for planning and implementing the EHRM program.[4]

Deployment Schedule for the New EHR System

Initially, VA planned to deploy the new system at sites in stages based on their geographical location over a 10-year period, through 2028. In

[3]A cloud-based service can allow an agency to only pay for the IT services used, when executed effectively.

[4]The office was previously referred to as the Office of Electronic Health Record Modernization.

October 2020, VA first deployed the new EHR at the Mann-Grandstaff VA Medical Center and planned to deploy it to other sites.[5] However, in March 2021, VA identified issues with the initial deployment, which led to a strategic review of the program. The strategic review identified eight challenge areas for EHRM, as well as plans and progress towards addressing those challenges.[6]

After the review, VA deployed the new system to the following locations in 2022:

- Jonathan M. Wainwright Memorial VA Medical Center (Walla Walla) in March 2022,
- VA Central Ohio Health Care System (Columbus) in April 2022, and
- Roseburg VA Health Care System and VA Southern Oregon Rehabilitation Center and Clinics (White City) in June 2022.

In June 2022, VA announced that it would be pausing future deployments of the system until 2023 to allow time for improvements to the system. Subsequently, in October 2022, VA delayed deployments to address technical and other system performance issues.

In April 2023, VA announced that it planned to halt future deployments of the new EHR system to prioritize making improvements at the five sites currently using the system. VA did not plan to schedule additional deployments until it was confident that the new EHR system is effectively functioning at the sites that are currently using the system.

[5]These sites are within the Veterans Health Administration's (VHA) Veterans Integrated Services Network 20 (VISN 20) and VISN 10. VHA is divided into areas called Veterans Integrated Services Networks (VISNs). There are currently 18 VISNs throughout VHA based on geographic location. VISNs provide oversight and guidance to the VA Medical Centers and VA Health Care Systems within their area and are sometimes called a "network." VISN 20 includes medical centers and community-based outpatient clinics in the states of Alaska, Washington, Oregon, most of Idaho, and one county each in Montana and California. VISN 10 serves veterans in the Ohio, Indiana, and Michigan areas.

[6]VA summarized the results of its strategic review in *the Electronic Health Record Comprehensive Lessons Learned* report. Department of Veterans Affairs, *Electronic Health Record Comprehensive Lessons Learned* (Washington, D.C.: July 2021). The eight challenge areas described in the report are improving the veteran experience, ensuring patient safety, providing extended training to the frontline employees, building confidence at VA sites, implementing organizational and program improvements, making governance effective, improving operational efficiencies, and centralizing data management for workers and veterans.

EHRM Costs

VA contracted with the Institute for Defense Analyses to provide an independent cost estimate for the program. In September 2022, the Institute reported that the EHRM life cycle cost estimate was $49.8 billion:

- $32.7 billion for a 13-year implementation phase and
- $17.1 billion in sustainment costs for the following 15 years.

As previously mentioned, VA has reported obligating about $9.42 billion on EHRM from fiscal year 2018 through the first quarter of fiscal year 2023. This includes three areas:

- the EHR contract ($4.49 billion),
- IT infrastructure ($2.61 billion), and
- program management ($882 million).

In addition, VA reported obligating about $1.27 billion and $170 million on the program from the Veterans Health Administration (VHA) and the Office of Information and Technology (OIT), respectively.

GAO Has Reported on VA Health Care and EHRM

In 2015, we designated VA health care as a high-risk area for the federal government, in part due to its IT challenges.[7] In addition, we have previously reported on the EHRM program:

- In June 2020, we reported on the process for configuring the department's new EHR system.[8] We noted that VA's decision-making procedures were generally effective, but the department did not always ensure key stakeholder involvement. We recommended (and VA concurred) that VA ensure the involvement of all relevant deployment site stakeholders in the EHR system configuration decision process. The department has begun to improve subject matter expert identification and involvement, but this type of involvement needs to continue until different stages of modernization

[7]VA's IT issues were highlighted in our 2015 high-risk report and subsequent high-risk reports. See GAO, *High-Risk Series: An Update*, GAO-15-290 (Washington, D.C.: Feb. 11, 2015); *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others*, GAO-17-317 (Washington, D.C.: Feb. 15, 2017); *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas*, GAO-19-157SP (Washington, D.C.: Mar. 6, 2019); and *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas,* GAO-21-119SP (Washington, D.C.: Mar. 2, 2021).

[8]GAO, *Electronic Health Records: Ongoing Stakeholder Involvement Needed in the Department of Veterans Affairs' Modernization Effort,* GAO-20-473 (Washington, D.C.: June 5, 2020).

unfold. As such, our recommendation remains not fully implemented as of April 2023.

- In February 2021, we reported that VA had made progress toward deploying the new EHR system by making configuration decisions, developing capabilities and interfaces, completing testing events, and deploying the system at the first site in October 2020.[9] However, we noted that the department was at risk of developing a system that may not perform as intended or could negatively impact the likelihood of successful adoption by users if critical and high severity test findings (that could result in system failure) were not resolved prior to future deployments.[10]

We made two recommendations (and VA concurred) in February 2021, including that VA postpone deployment of the new EHR system at planned sites until any resulting critical and high severity test findings are appropriately addressed. VA stated that it planned to continue to test and appropriately adjudicate all critical and high severity test findings prior to future deployments. We will continue to monitor VA's actions to implement our recommendation as the department makes additional system deployments.

- In February 2022, we reported that our work and VA's analyses indicated challenges with the quality of transferred data and with how the new EHR system worked for some users.[11] For example, VA identified errors in allergy, medication, and immunization data, which raise patient safety concerns. We recommended that VA establish and use performance measures and goals to ensure the quality of transferred data. The department concurred with our recommendation and began to take steps to address it. However, those steps had not yet been completed as of April 2023.

[9]GAO, *Electronic Health Records: VA Has Made Progress in Preparing for New System, but Subsequent Test Findings Will Need to Be Addressed*, GAO-21-224 (Washington, D.C.: Feb. 11, 2021).

[10]A critical test finding results in the failure of the complete software system. A high severity test finding results in the failure of the complete software system; however, there are acceptable workarounds.

[11]GAO, *Electronic Health Records: VA Needs to Address Data Management Challenges for New System,* GAO-22-103718 (Washington, D.C.: Feb. 1, 2022).

VA's Organizational Change Management Activities Were Partially Consistent with Leading Practices

According to federal guidance and other leading practices, change management practices are intended to apply an organized and structured framework to the often chaotic and perplexing world of organizational change.[12] Effective change management techniques help managers to plan, organize, and negotiate successful changes in the organization. The objective of managing organizational change is to maximize the likelihood of successfully implementing change quickly and with reduced risk. Leading practices for change management activities include: (1) developing a vision for change, (2) identifying and managing stakeholders, (3) effectively communicating, (4) assessing the readiness for change, (5) increasing workforce skills and competencies, (6) identifying and addressing potential barriers to change, (7) establishing targets and metrics for change, and (8) assessing the results of change.

As shown in table 1, VA's organizational change management activities for the EHRM program were partially consistent with seven of the leading practices and not consistent with one leading practice.

Table 1: Extent to Which the Electronic Health Record Modernization (EHRM) Program's Activities Were Consistent with Organizational Change Management Leading Practices

Leading practice	GAO assessment
Developing a vision for change	**Partially consistent** - The department developed a vision to have a comprehensive electronic health (EHR) accessible across Department of Veterans Affairs (VA), the Department of Defense (DOD), and community care providers to enhance the quality of health care through a new EHR system and standardized clinical practice workflow processes. However, VA has not established a VA-driven strategy for change. A Veterans Health Administration commissioned report from April 2021 noted the need for a VA-driven change management strategy to formalize the structure and people capabilities to support the readiness of end users and drive adoption. As of January 2023, it had not provided documentation of a VA-driven change management strategy.

[12]Project Management Institute, Inc., *Managing Change in Organizations: A Practice Guide*, (Newtown Square, PA: 2013); Office of Personnel Management (OPM), *Migration Planning Guidance Information Documents, Change Management Best Practices*, October 2011; GAO, *Business Process Reengineering Assessment Guide—Version 3*, (GAO/AIMD-10.1.15); Prosci, *The Prosci ADKAR® Model, A Goal Oriented Change Management Model to Guide Individual and Organizational Change*; ISACA, *COBIT 2019 Framework*, 2019. ADKAR® is a registered trademark of Prosci, Inc.

Leading practice	GAO assessment
Identifying and managing stakeholders	**Partially consistent** - The program identified stakeholder groups, created a stakeholder communication strategy and plan, and conducted numerous workshops at the national and local level for the purpose of engaging, identifying, and analyzing stakeholders. However, we previously reported that VA did not always effectively communicate information to stakeholders, including medical facility clinicians and staff, to ensure relevant representation at local workshop meetings and that the department did not have a stakeholder register to identify and engage key stakeholders for the EHRM program.[13] We recommended that VA develop such a tool. EHRM Integration Office officials said that in August 2022 they began conducting workshops with Directors from future implementation sites to focus on site stakeholder engagement. If VA continues to focus on site stakeholder engagement, this should better position the department to effectively identify and manage stakeholders, while addressing our open recommendation.
Communicating effectively	**Partially consistent** - The program defined a stakeholder communication plan to engage with stakeholders involved with the EHR system implementation and deployment. The program used various methods to communicate with program stakeholders, and documented over 5,000 completed communications between December 2018 and October 2022. However, users of the system indicated that information on system changes and the status of trouble tickets were not effectively communicated after initial system deployment. Further, in November 2020, the program identified a risk that a communication plan had not been established to inform VA end users of changes, major incident management, upgrades, and package releases and as of July 2022, this risk was still open and a communication plan for changes in sustainment had not been finalized. In October 2022, EHRM program officials said that rather than develop the sustainment communication plan they were communicating through weekly user updates. However, department documentation of feedback from sites continued to show the need to distribute more frequent updates on change requests and system downtimes.
Assessing the readiness for change	**Partially consistent** - The program assessed its readiness for change by conducting change readiness questionnaires (CRQ) to serve as a baseline assessment across the initial deployment sites and to allow a tailored change effort to address gaps. According to the program office, as of January 2023, VA had conducted 55 CRQs at 28 deployment sites. However, VA received limited responses to questionnaires assessing readiness for change and results from the CRQs indicated that users were not ready for the change. Further, the program did not have assurance that it had resolved potential problems in a timely fashion.
Increasing workforce skills and competencies	**Not consistent** – Numerous assessments and reports identified that training has been a weakness for the program. EHRM program officials acknowledged that training did not meet users' expectations and effectively support the transition because the contractor-provided training focused on using the system. However, users needed additional training and support for learning the new workflow processes simultaneously. They said the program took a number of actions to address training issues, including adding additional clinical experts to support onsite training and increased use of a hands-on practice environment (i.e., sandbox). In addition, in September 2022, the department's contractor, Oracle Cerner, announced that it would work with an outside entity to make the training more efficient, applicable, and useful for caregivers. Nevertheless, VA has not yet demonstrated if the actions to increase workforce skills and competencies have been effective.

[13]GAO, *Electronic Health Records: Ongoing Stakeholder Involvement Needed in the Department of Veterans Affairs' Modernization Effort*, GAO-20-473 (Washington, D.C.: June 5, 2020) and *Electronic Health Records: VA Needs to Address Data Management Challenges for New System*, GAO-22-103718 (Washington, D.C.: Feb. 1, 2022).

Leading practice	GAO assessment
Identifying and addressing potential barriers to change	**Partially consistent** - The program identified activities to monitor resistance to change. For example, VA conducted site visits and change readiness questionnaires, to gather feedback and propose actions or recommendations to address feedback. In addition, the Secretary conducted a Strategic Review, which identified barriers that needed to be addressed. As of January 2023, VA had completed 45 of 69 actions identified in the review, and 24 were in progress. VA planned to complete these action items by October 2024.
Establishing targets and metrics for change	**Partially consistent** - The EHRM program proposed various metrics for change such as the amount of time spent in the EHR system and the number of patients seen in an ambulatory setting. The program also identified metrics for performance of the new system such as measuring veteran experience, health care operations, workforce support, and quality and safety. However, VA had not fully established targets to measure the adoption of the change. In addition, the department did not have a plan that outlined the metrics, including agreed upon targets, to measure the results of the change. VA reported in November 2022 that it was continuing to refine functional and technical quality standards to define success, including metrics to define access to care and clinical operational efficiency but did not provide a timeline for when it would be final.
Assessing the results of change	**Partially consistent** - To measure adoption, the EHRM program collected data, such as amount of time spent in the EHR system and the number of patients seen in an ambulatory setting. Further, the program has been tracking performance metrics such as veteran experience, health care operations, workforce support, and quality and safety since initial deployment in October 2020. However, VA had not fully identified specific targets and users shared examples of concerns about their productivity using the new system and veterans' access to care. In addition, the program had not demonstrated that it had taken action needed to ensure that the change has been reinforced and sustained. For example, a March 2021 survey aimed at measuring Mann-Grandstaff users' perspective on their ability to use the new system noted that 82 percent of users agreed or strongly agreed that the new EHR was cumbersome to use, and 84 percent agreed or strongly agreed that the new EHR was unnecessarily complex.

Legend: Consistent – VA provided evidence that it conducted organizational change management activities mostly consistent with leading practices. Partially consistent – VA provided evidence that it conducted organizational change management activities consistent with some of the leading practice criteria, but some key parts were not followed. Not consistent – VA did not provide sufficient evidence that it followed leading practices.

Source: GAO analysis of VA data. | GAO-23-106785

VA's Organizational Change Management Activities Were Not Fully Consistent with Leading Practices for Various Reasons

The program's organizational change management activities were not fully consistent with leading practices for a variety of reasons. First, VA did not have a VA-driven strategy for how its efforts would supplement the contractor-led change management activities for deployment. According to EHRM program officials, the contractor's change management activities focused on the activities required to deploy the new system. However, these activities did not address user challenges with transitioning to new workflow processes. Further, EHRM officials noted that the program office had experienced transition in change management leadership and vacancies in their change management staffing. This limited the resources available for coordinating and implementing change management activities.

Until the program implements all eight of the leading practices for change management, future deployments could be at risk of similar change management challenges. This could hinder users' ability to effectively use

the system, impede their knowledge of new workflows, and limit the utility of system improvements.

Further, the results of post-deployment questionnaires demonstrate the need for improvements in organizational change management activities. Specifically, according to VA-reported data, users provided feedback that was below average regarding their abilities to use the new EHR system.[14] Based on the program's research, a score of 68 out of 100 was considered average and scores below 68 were below average (see table 2).

Table 2: Department of Veterans Affairs Electronic Health Record (EHR) Modernization Program Post-deployment Feedback on New EHR System

Site	Date	Average summed system usability scale score
Mann-Grandstaff VA Medical Center	February - March 2021	24.38
Jonathan M. Wainwright (Walla Walla)	May - June 2022	32.33
Central Ohio (Columbus)	July 2022	24.14
Roseburg	July - August 2022	23.19
Southern Oregon (White City)	August 2022	24.72

Source: GAO analysis of Department of Veterans Affairs reported data. | GAO-23-106785

In our interviews, users expressed concern about staff morale and burnout. One user reported working 60 hours a week and trying not to drown in carrying out duties because completing chart reviews, which used to take 15-30 minutes using the old system, was now taking hours or even days. Other users said that providers were volunteering their time, and one user said this was because tasks took 10-15 percent more time to complete. Finally, users noted that staff in their department had resigned, specifically due to problems with the new EHR system. Additional details about users' satisfaction with the new system are discussed in the next section of this statement.

[14]The response rates to these questionnaires ranged from 12 percent to 22 percent.

Accordingly, we recently made seven recommendations to VA regarding change management activities.[15] Specifically, we recommended that the Secretary of VA:

- document a VA-specific change management strategy to formalize its approach to drive user adoption;
- ensure that the department's planned improvements to communication of system changes meets users' needs for the frequency of the updates provided;
- take steps to improve change readiness scores prior to future deployments;
- ensure steps taken by the EHRM program and Oracle Cerner to increase workforce skills and competencies through improved training and related change management activities have been effective;
- address users' barriers to change, by ensuring planned completion of all actions identified in the Secretary's Strategic Review;
- develop a plan, including a timeline, for establishing (1) targets for measuring the adoption of changes and (2) metrics and targets to measure the resulting outcomes of the change; and
- measure and report on outcomes of the change and take actions to support users' ability to use the system to reinforce and sustain the change.

VA concurred with our recommendations.

[15]These recommendations were conveyed in our March 10, 2023, briefing to congressional committees and members and will be published in a May 2023 report.

Although Users Were Dissatisfied with the New System, VA Has Not Yet Established Goals for Improvement

GAO and federal IT guidance recognize the importance of defining program goals and related performance targets and using such targets to assess progress in achieving the goals.[16] Also, leading practices identify continuous customer feedback as a crucial element of IT project success, from project conception through sustainment. Particularly for IT programs like EHRM, where development activities are ongoing, customer (i.e., end user) perspectives and insights can be solicited through various methods. Such methods include interviews and satisfaction surveys, to validate or raise questions about the project's implementation. Further, leading practices emphasize that periodic user satisfaction data be proactively used to improve performance and demonstrate the level of satisfaction the project is delivering. Measuring user satisfaction with the system is essential for monitoring progress towards pre-established goals or targets and allows programs to understand whether users' operational needs have been met.

VA Has Taken Steps to Obtain Feedback; Users Generally Expressed Dissatisfaction with the New System

VA has taken steps to obtain feedback on the performance and implementation of EHRM. Specifically, in September 2022, VA conducted a survey of users from two regions, VISN 10 and VISN 20, where the new EHR system had been deployed. In addition, VHA conducted another survey in September 2021 and September 2022 to assess Mann-Grandstaff employees' perceptions of the implementation of the new EHR.

In September 2022, VA worked with a contractor to conduct a user satisfaction survey to determine user satisfaction with the Oracle Cerner system. In December 2022, the contractor reported on VA's results in comparison to other health care systems. The results of the survey indicated that users were not satisfied with the performance of the new system or the training for the new system. For example, about 79 percent (1,640 of 2,066) of users disagreed or strongly disagreed that the system enabled quality care.[17] In addition, about 89 percent (1,852 of 2,074) of

[16]GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, GAO-04-394G (Washington, D.C.: March 2004); Executive Office of the President, Office of Management and Budget, *Evaluating Information Technology Investments, A Practical Guide* (November 1995), Office of Management and Budget, *Preparation, Submission, and Execution of the Budget,* OMB Circular No. A-11 (August 2022); and General Services Administration, *Modernization and Migration Management (M3) Playbook,* accessed Oct. 20, 2022, https://www.ussm.gov/m3.

[17]In response to the statement, the EHR enables me to deliver high-quality care, 6 percent (120 of 2,066) users agreed, 15 percent (306 of 2,066) were indifferent, and 79 percent (1,640 of 2,066) disagreed or strongly disagreed.

users disagreed or strongly disagreed that the system made them as efficient as possible.[18] In addition, fewer VA users reported that they agreed that the system enabled them to deliver high-quality care when compared to DOD and other health care systems. For example, about 23 percent (1,000 of 4,432) of DOD users agreed that the system enabled quality care.

In response to the survey of Mann-Grandstaff users' morale in September 2021, most users noted that as a result of the new EHR implementation, their morale, job satisfaction, and level of burnout had worsened (see table 3).[19]

Table 3: Department of Veterans Affairs Veterans Health Administration Survey Feedback on New Electronic Health Record (EHR) System, as of September 2021

	Improved		Not changed		Worsened		
	Number	Percent	Number	Percent	Number	Percent	**Total**
As a result of the EHR implementation, my morale has:	6	0.7%	133	16.0%	691	83.3%	**830**
As a result of the EHR implementation, my job satisfaction has:	6	0.7%	173	20.8%	652	78.5%	**831**
As a result of the EHR implementation, my level of burnout has:	4	0.5%	154	18.6%	670	80.9%	**828**

Source: GAO analysis of Department of Veterans Affairs' data. | GAO-23-106785

In September 2022, most users still noted that as a result of the new EHR implementation, their morale, job satisfaction, and level of burnout had worsened (see table 4).[20]

[18]In response to the statement, the EHR makes me as efficient as possible, 4 percent (92 of 2,074) users agreed, 6 percent (130 of 2,074) were indifferent, and 89 percent (1,852 of 2,074) disagreed or strongly disagreed.

[19]About 56 percent (833 of approximately 1,500) recipients responded to this survey.

[20]About 52 percent (742 of approximately 1,440) recipients responded to this survey.

Table 4: Department of Veterans Affairs Veterans Health Administration Survey Feedback on New Electronic Health Record (EHR) System, as of September 2022

	Improved		Not changed		Worsened		
	Number	Percent	Number	Percent	Number	Percent	**Total**
As a result of the EHR implementation, my morale has:	91	12.3%	119	16%	532	71.7%	**742**
As a result of the EHR implementation, my job satisfaction has:	90	12.1%	142	19.2%	509	68.7%	**741**
As a result of the EHR implementation, my level of burnout has:	87	11.8%	123	16.7%	528	71.5%	**738**

Source: GAO analysis of Department of Veterans Affairs' data. | GAO-23-106785

When asked to rate the improvement in the EHR since they began using the new medical record, of 741 respondents, 231 (31 percent) said no improvement, 372 (50 percent) said minimal improvement, 49 (7 percent) said moderate improvement, and 89 (12 percent) said great improvement.

Similarly, our interviews from the first three deployment sites indicated that users were not satisfied with the new system. Specifically, 51 of 63 users said that they disagreed or strongly disagreed that overall they were satisfied with the new EHR system. In addition, 48 of 63 users said they disagreed or strongly disagreed that the new EHR system met the expectations they had prior to and during go-live. Table 5 provides the results from our interviews regarding user satisfaction of the new system.

Table 5: Users Responses to Statements on New Electronic Health Record (EHR) System

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	No basis to judge	Total
The new EHR system meets the expectations I had prior to and during go-live.	2	9	3	23	25	1	63
The new EHR system is available when I need it.	1	18	11	29	4	0	63

Health data was migrated accurately from the old EHR system to the new EHR system.	0	11	6	22	21	3	63
Compared to the old system the new EHR system requires fewer steps to accomplish what I need to do.	1	1	6	21	33	1	63
Overall, I am satisfied with the new EHR system.	1	6	5	31	20	0	63

Source: GAO analysis of interviews with Department of Veterans Affairs officials. | GAO-23-106785

Further, Mann-Grandstaff users' responses to structured interview questions only minimally indicated improved satisfaction or changes in the perceptions of the effect of the new EHR system on productivity or quality of care from our interviews in 2021 to our interviews in 2022. Specifically, as shown in table 6, in 2021, most users (23 of 26) said they disagreed or strongly disagreed that overall they were satisfied with the new EHR system. In 2022, most users (18 of 23) said they disagreed or strongly disagreed that they were satisfied with the new EHR system (see table 6).

Table 6: Mann-Grandstaff User Satisfaction with New Electronic Health Record (EHR) System in 2021 and 2022

Do you agree or disagree with the following statement based on your current experience using the new EHR system? Overall, I am satisfied with the new EHR system.	Mann-Grandstaff 2021 (Out of 26)	Mann-Grandstaff 2022 (Out of 23)
Strongly agree	0	0
Agree	0	1
Neither agree nor disagree	3	4
Disagree	6	9
Strongly disagree	17	9

Source: GAO analysis of interviews with Department of Veterans Affairs officials. | GAO-23-106785

In addition, participants in our structured interviews provided examples of challenges they experienced with the pharmacy system module that contributed to user dissatisfaction with the system. For example, system users told us

- Processing prescriptions took much longer in the new EHR system, leading to increased backlogs and decreased efficiency, which led to

patient safety concerns because the pharmacy could not complete prescriptions in a timely fashion.

- The pharmacy department at one facility increased from 15 staff to 60 to manage increased workload associated with using the new system.
- Multiple instances of double prescriptions, incorrect medication orders, and veterans receiving medications that were no longer prescribed had occurred.
- Medications were mailed to the wrong address and veterans did not received medications in some cases.
- Medications defaulted to being an inpatient medication rather than being available at the pharmacy for the patient to pick up.
- Instructions for medications were sometimes based in Pacific standard time, when the medical facility was in the Eastern time zone.
- VA users could mistakenly order medications that are only available to DOD.

VA's own assessment also identified multiple pharmacy-related concerns such as inefficient processes requiring an increase in full-time employees, medication information not carrying over to the next appointment, and discontinued prescriptions without probable replacements. In July 2022, VA contracted with Oracle Cerner to make seven enhancements to address challenges with the pharmacy system module. Three of the seven enhancements were deployed in February 2023. VA plans to deploy the remaining four in August 2023.

VA documentation noted that, as of March 2023, the initial three enhancements had provided small, incremental improvements but that many additional improvements were needed for the new EHR system to become safe, efficient, cost-effective, and compliant. However, as of March 2023, VA had not yet determined when the additional improvements to address several of the key pharmacy-related safety issues identified in its assessment will be completed.

VA Has Not Established Goals for User Satisfaction

VA has not established targets (i.e., goals) to assess user satisfaction. EHRM provided several reasons for why the program had not established specific goals for user satisfaction for the system:

- In February 2022, EHRM program officials stated there was an opportunity for additional metrics such as user satisfaction targets in the future.

- In October 2022, EHRM program officials stated they were focused on addressing technical changes to improve the system usability before establishing targets or goals for user satisfaction.

Nevertheless, until VA establishes goals for user satisfaction, the department will be limited in its ability to objectively measure progress toward improving EHRM users' satisfaction with the system. The department will also lack a basis for determining when satisfaction has improved. Such a basis would help ensure that the system is not prematurely deployed to additional sites, which could risk patients' safety. Accordingly, we recently recommended that the Secretary of VA establish user satisfaction targets (i.e., goals) and demonstrate improvement toward meeting those targets prior to future system deployments.[21] VA agreed with this recommendation.

VA Did Not Adequately Identify and Address System Issues

Efforts to identify and address system issues can be supported by activities such as resolving trouble tickets quickly and conducting an independent operational assessment. VA did not adequately identify and address system issues. Specifically, VA did not ensure that trouble tickets for the new EHR system were resolved within timeliness goals, but subsequently worked with the contractor to reduce the number of tickets that were over 45 days old. Additionally, although VA has assessed the system for user performance at two sites, as of January 2023, VA had not conducted an operational assessment to evaluate if the new EHR system satisfies the intended use and user needs in the operational environment.

VA and Its EHR System Contractor Have Worked to Improve Trouble Ticket Resolution

VA's contract with Oracle Cerner addressed the support and resolution of trouble tickets during and after implementation of the new EHR system.

[21]These recommendations were conveyed in our March 10, 2023, briefing to congressional committees and members and will be published in a May 2023 report.

Based on impact and urgency, each ticket is assigned a priority of critical, high, medium, or low.[22]

According to a service level agreement (SLA) between VA and Oracle Cerner, resolution timeliness goals varied depending on the ticket priority levels as follows:

- Critical tickets: 100 percent of trouble tickets resolved or mitigated through VA approved mitigation strategy within 5 hours and closed within 24 hours.[23]
- High tickets: 90 percent of trouble tickets resolved within 16 hours and no single ticket exceeds 64 hours.
- Medium tickets: 80 percent of trouble tickets resolved within 4 business days and no single ticket exceeds 60 calendar days.
- Low tickets: 80 percent of trouble tickets resolved within 6 business days and no single ticket exceeds 60 calendar days.

However, VA determined that during the 25 month period from December 2020 to December 2022, Oracle Cerner did not meet the SLA established for the resolution of system trouble tickets. Specifically, Oracle Cerner did not meet the SLA for:

- critical severity trouble tickets for 4 of the 25 months
- high severity trouble tickets for 15 of the 25 months

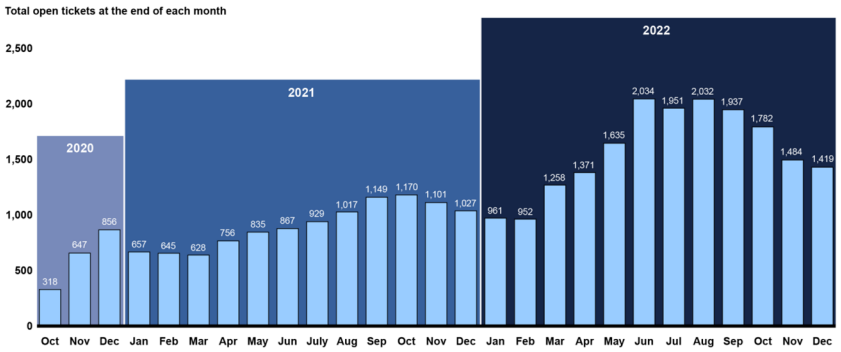
[22]**Critical** - A patient safety condition exists or greater than 25 percent of concurrent users across a medical center are unable to process transactions or access managed solutions critical to their ability to conduct daily business; and no bypass or alternative is available. **High** - When (15-25 percent) of concurrent users across a VAMC and associated facilities are unable to process transactions or access managed solutions required to conduct daily business or a component of managed software required to compete a crucial workflow is non-functional for more than one user and no bypass or alternative is available. **Medium** - A component, minor solution, or procedure is down, unusable, or difficult to use but, no immediate impact on service delivery, financial, or patient care. Critical and high problems that have an acceptable workaround, or bypass available will be assigned as a moderate incident. **Low** - A component, procedure or personal application (not critical to Client) is unusable. No impact to business, single Incident failure, and an acceptable workaround, alternative, or bypass is available.

[23]A ticket is considered 'resolved' when Cerner places the ticket in a 'Client Action' status for the client to approve / confirm the issue is addressed. A ticket is considered 'completely resolved' when VA has approved and confirmed that a trouble ticket placed in "Client Action" has been fully addressed. 'Completely resolved' and 'closed' are used interchangeably. In the trouble ticket data, 'closed' is a ticket which has been resolved and cannot be reopened.

- medium severity trouble tickets for 21 of the 25 months, and
- low severity trouble tickets for 24 of the 25 months.

To address a higher-than-expected volume of tickets that were not addressed within 60 calendar days or less, in August 2022, Oracle Cerner developed a 120-day plan to reduce the number of open tickets that were 45 days or older. Oracle Cerner developed its plan in response to a VA letter of concern regarding the new EHR system's performance. As of January 2023, Oracle Cerner had reduced the number of tickets that were 45 days or older from 714 to 108.[24] Nevertheless, as of December 2022, VA had over 1,400 open tickets, which was more than the number of tickets at the end of 2020 and 2021. Figure 1 depicts the number of open trouble tickets per month from October 2020 to December 2022.

Figure 1: Department of Veterans Affairs Electronic Health Record Modernization Open Trouble Tickets per Month



Source: GAO analysis of Department of Veterans Affairs trouble ticket data. | GAO-23-106785

Oracle Cerner officials provided explanations for the difficulties with meeting the SLA.

[24]According to Cerner's plan some incidents could be converted to change requests, if appropriate.

- VA's IT systems are more complex than DOD's, which contributes to a larger number of trouble tickets.
- Oracle Cerner relies on the local informatics staff to help triage the tickets, but some VA sites had little informatics support, which increases the burden on the Oracle Cerner help desk. [25]
- Oracle Cerner needed to apply additional staffing resources to address the problem.

Additionally, according to VA's strategic review status report, the department recognized that its capacity to resolve the volume of tickets at the five deployment sites was overwhelmed due to, among other things, an insufficient number of subject matter experts.

Until the program resolves trouble tickets according to established time frames, users' system issues will not be resolved in a timely manner. Additionally, there is a risk that VA will not be able to address users' system issues effectively going forward, particularly when larger sites go live. Accordingly, we recently recommended that the Secretary of VA ensure that future system trouble tickets are resolved within established timeliness goals.[26] VA concurred with our recommendation.

VA Has Not Conducted Independent Operational Assessments to Validate That the System Meets User Needs

According to leading practices for software verification and validation, a product should be evaluated to determine whether it satisfies the intended use and user needs in the operational environment.[27] An operational assessment is an evaluation of operational effectiveness and operational suitability made by an independent operational test activity with user support as required.[28]

The EHRM program's master test plan from May 2021 described plans to execute an independent post-production validation and operational

[25]Health Informatics is a multidisciplinary and integrative field that focuses on health information management and IT in support of health care. The field of health informatics draws from computer, cognitive, and social sciences for the development, change management, implementation, configuration, deployment and evaluation of systems that manage health information.

[26]These recommendations were conveyed in our March 10, 2023, briefing to congressional committees and members and will be published in a May 2023 report.

[27]IEEE Standards Association, *IEEE Standard for System, Software, and Hardware Verification and Validation* (IEEE Std. 1012-2016), (September 2017).

[28]Defense Acquisition University Glossary, accessed September 1, 2022, https://www.dau.edu/acquipedia/pages/articlecontent.aspx?itemid=46.

assessment to assess the degree to which the new EHR met the users' needs in their daily operational use in the production environment. According to the program's test plan, the purpose of the operational assessment was to evaluate the system's efficiency, effectiveness, usability, user satisfaction, and training.

However, VA has not conducted an operational assessment and, as of January 2023, did not plan to do so. EHRM program officials said that they did not plan to execute an independent operational assessment because such an assessment would be duplicative to existing post-go-live evaluations and change assessment surveys, and disruptive to site operations. Further, the EHRM Master Test Plan was updated to remove the requirement for an operational assessment.

In July 2022, officials from VHA and the EHRM program office conducted a post-go-live study at the Columbus deployment site. These officials observed slow system response, system errors, user interface issues, and inefficient workflows that affected the end user experience. In addition to these observations, the study report stated that the scope of the assessment was limited and recommended further usability assessments.

Following the July 2022 study, VA conducted a review focused on standardization, usability, and safety issues at the five deployment sites.[29] The study team reviewed 300 issues and prioritized 30 to address that were related to patient safety. Additionally, according to EHRM program officials, in September 2022 they visited the Columbus deployment site to obtain feedback from users on high-risk workflows. Program officials said they also conducted an assessment at two sites in an effort to improve system performance. However, because these assessments were not conducted independent of the program, they lack the objective evaluation and analysis characteristic of an independent operational assessment.

Until an independent operational assessment of the new EHR system is conducted, VA will be limited in its ability to validate that the system is operationally suitable and effective, and to identify, track, and resolve key operational issues. An operational assessment, particularly if conducted by an independent entity, would enable the department to systematically catalog, report on, and track resolution of assessment findings with

[29]VA referred to this review as the EHRM Sprint Project. The Sprint Project work streams included VHA EHR governance processes, medical order issues, clinical episode review team review and assessment actions, and collaborative readiness.

greater rigor, transparency, and accountability. Accordingly, we recently recommended that the Secretary of VA reinstitute plans to conduct an independent operational assessment to evaluate the suitability and effectiveness of the new EHR system for users in the operational environment.[30] VA agreed with this recommendation.

In summary, the program's organizational change management activities were not fully consistent with eight leading practices. These practices are especially important given that VA's transition to the new EHR was challenging for users at the initial deployment sites. In addition, VA undertook several efforts to assess user satisfaction with the new system, but results indicated that users were dissatisfied with the system. Further, VA had not established targets or goals for user satisfaction. Consequently, it is not evident what basis the department will use to determine when satisfaction has sufficiently improved to support a decision to deploy the system at additional sites. Such a basis is critically important to ensuring that systems not be deployed prematurely and pose unnecessary risks to patient health and safety. Finally, VA did not ensure that system issues had been addressed within established timeliness goals nor has it conducted an independent operational assessment, which could be beneficial in validating that the system satisfies user needs in the operational environment. We will continue to assess these issues and to track VA's progress in response to our recommendations.

Chairman Rosendale, Ranking Member Cherfilus-McCormick, and Members of the Subcommittee, this completes my prepared statement. I would be pleased to respond to any questions that you may have.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions about this testimony, please contact Carol C. Harris, Director, Information Technology and Cybersecurity, at (202) 512-4456 or harriscc@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. GAO staff who made key contributions to this testimony are Mark Bird (Assistant Director), Merry Woo (Analyst-in-Charge), Tim Barry, Chris Businsky, Quintin Dorsey, Rebecca Eyler, Ash Harper, Igor Koshelev, Christy Ley, Monica Perez-Nelson, Rachael Scott, Eric Trout, Walter Vance, Adam Vodraska, and Charles Youman.

[30]These recommendations were conveyed in our March 10, 2023, briefing to congressional committees and members and will be published in a May 2023 report.

Appendix I: Objectives, Scope, and Methodology

The review upon which this testimony was based culminated in a briefing to congressional committees and members.[1] The objectives of our review were to determine the extent to which (1) VA has employed organizational change management strategies for the Electronic Health Record Modernization (EHRM) program consistent with leading practices, (2) VA has assessed satisfaction with the new system, and (3) VA has identified and addressed electronic health record (EHR) system issues.

To address the first objective, we conducted a literature search for organizational change management leading practices.[2] We identified leading change management practices that are applicable to organizational transitions, such as VA's EHR system modernization. We then evaluated VA's activities against these practices by examining program plans for organizational change management and discussing the program's approach with cognizant EHRM program officials.

To assess whether the program's activities were aligned with its planned approach and leading practices, we reviewed EHRM change management documentation, such as wave deployment plans, stakeholder communication strategy and plan, change impact analyses, site deployment and work plans, and change readiness questionnaire reports. We supplemented our analysis with examples from interviews with users from the Mann-Grandstaff VA Medical Center, Jonathan M. Wainwright VA Medical Center (Walla Walla), and VA Central Ohio Health Care System (Columbus), the three locations where the new system was first deployed.

To address the second objective, we obtained and reviewed results of surveys that VA conducted to determine users' satisfaction with the new EHR, including a survey conducted by VHA to assess Mann-Grandstaff

[1]On March 10, 2023, we provided a briefing on the results of our review to the House and Senate Committees on Appropriations, Subcommittees on Military Construction, Veterans' Affairs, and Related Agencies; House and Senate Committees on Veterans' Affairs; Rep. Jim Banks; and Rep. Susie Lee. We plan to publish the briefing in a May 2023 report.

[2]Project Management Institute, Inc., *Managing Change in Organizations: A Practice Guide* (Newtown Square, Pa.: 2013); Office of Personnel Management, *Migration Planning Guidance Information Documents, Change Management Best Practices* (Oct. 7, 2011); GAO, *Business Process Reengineering Assessment Guide*, version 3, GAO/AIMD-10.1.15 (Washington, D.C.: May 1997); ISACA, *COBIT 2019 Framework* (2019); and Prosci, *The Prosci ADKAR® Model*, *A Goal Oriented Change Management Model to Guide Individual and Organizational Change,* accessed Feb. 21, 2021, https://www.prosci.com/methodology/adkar. ADKAR® is a registered trademark of Prosci, Inc.

employees' perceptions of the implementation of the Oracle Cerner EHR and post-deployment system usability surveys conducted by the EHRM program office. We obtained documentation regarding the department's administration of its user satisfaction surveys to determine that the data were sufficiently reliable for our purposes. We met with EHRM program officials and VHA officials to discuss whether the department had established any goals for user satisfaction.

We conducted structured interviews with selected users from the Mann-Grandstaff VA Medical Center, Jonathan M. Wainwright VA Medical Center (Walla Walla), and VA Central Ohio Health Care System (Columbus), the three locations where the new system was first deployed. Specifically, we conducted structured interviews with 63 users at these three locations between April and August 2022. We reviewed the results of our structured interviews to identify examples of user dissatisfaction.

The methodology for selecting interviewees was as follows: we received a list of Mann-Grandstaff VA Medical Center employees who have been involved with national EHR councils. First, we conducted two pre-test interviews with leadership staff and made minor revisions to our structured interview instrument. We then selected one user from each of the 16 departments represented among the councils. For departments that had multiple users involved in the national councils, a user was randomly selected. In addition, two users were selected based on recommendations from the Mann-Grandstaff Medical Center leadership. Finally, an additional six users were selected based on recommendations from interviewees for a total of 26 interviews between April 2021 and June 2021. Following these interviews, we conducted additional interviews with 23 of the same users between April 2022 and June 2022. While the users' responses cannot be generalized to the entire population of EHR users at the initial deployment site, they represent a broad range of user roles and clinical areas at the sites.

Following interviews with Mann-Grandstaff VA Medical Center, we conducted structured interviews with selected EHR users from the Jonathan M. Wainwright Memorial VA Medical Center (Walla Walla) and VA Central Ohio Health Care System Center (Columbus). We conducted 40 interviews in total, 19 from Walla Walla and 21 from Columbus between June 2022 and August 2022.

The methodology for selecting interviewees at these two locations was as follows: we requested and received a list of representatives from a variety of clinical areas from both sites. We then interviewed the chief of staff at

each location. In addition, we selected 18 user representatives from Walla Walla and randomly selected 20 users from the list of user representatives from Columbus, excluding those who were not obvious users of the system. While these users' responses cannot be generalized to the entire population of EHR users at these deployment sites, they represent a broad range of user roles and clinical areas at the sites.

To address the third objective, we obtained data on system trouble tickets from October 2020 to December 2022. We analyzed VA's data on the contractor's performance meeting time frames established in the service level agreement (SLA) for the contractor to address system trouble tickets. We also obtained a summary of monthly reports from Oracle Cerner to VA on trouble ticket resolution with respect to the SLA. We also analyzed the trouble ticket data for trends in the number of open tickets at the end of each month.

We assessed the reliability of the trouble ticket data by reviewing it for obvious errors and missing data and interviewed responsible officials about any discrepancies in the data. We determined the data to be sufficiently reliable for the purposes of our briefing.

We also obtained documentation of the EHRM program's testing activities, including test plans and results. We then analyzed the plans, as well as test activities that had already been completed, to determine whether they constituted an independent operational assessment.

We supplemented our analyses for our objectives by interviewing relevant VA officials, including the EHRM Integration Office Executive Director, Functional Champion, and Deputy Chief Information Officer.

We conducted our performance audit from February 2021 through May 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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GAO Highlights

Highlights of GAO-23-106785, a testimony before the Subcommittee on Technology Modernization, Committee on Veterans' Affairs, House of Representatives.

Why GAO Did This Study

VA uses the Veterans Health Information Systems and Technology Architecture (VistA), which includes the department's legacy EHR system, to manage health care for its patients. VistA is technically complex, costly to maintain, and does not fully support the need to exchange health data with other organizations. In June 2017, VA initiated the EHRM program to replace VistA. VA has reported obligating about $9.42 billion on EHRM from fiscal year 2018 through the first quarter of fiscal year 2023.

GAO was asked to testify on its recent review to determine the extent to which VA has (1) followed leading organizational change management practices for the EHRM program, (2) assessed satisfaction with the new system, and (3) identified and addressed EHR system issues. For its recent review GAO identified leading change management practices and evaluated VA's activities against these practices. It also reviewed results of surveys that VA conducted to determine users' satisfaction with the new EHR, conducted interviews with selected users, and interviewed officials on user satisfaction goals. Further, GAO analyzed system trouble ticket and related data regarding VA's service level agreement with its contractor.

What GAO Recommends

GAO made 10 recommendations to VA in its recent review to address change management, user satisfaction, system trouble ticket, and independent operational assessment deficiencies. VA concurred with the recommendations.

View GAO-23-106785. For more information, contact Carol C. Harris at (202) 512-4456 or harriscc@gao.gov.

May 2023

ELECTRONIC HEALTH RECORDS

Challenges with VA's New System Call for Management Improvements

What GAO Found

The Department of Veterans Affairs (VA) organizational change management activities for the Electronic Health Record Modernization (EHRM) program were partially consistent with seven leading practices and not consistent with one leading practice (see table).

Extent to Which the Electronic Health Record Modernization (EHRM) Program's Activities Were Consistent with Organizational Change Management Leading Practices

Leading practice	GAO assessment
Developing a vision for change	Partially consistent
Identifying and managing stakeholders	Partially consistent
Communicating effectively	Partially consistent
Assessing the readiness for change	Partially consistent
Increasing workforce skills and competencies	Not consistent
Identifying and addressing potential barriers to change	Partially consistent
Establishing targets and metrics for change	Partially consistent
Assessing the results of change	Partially consistent

Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-23-106785

Until the program fully implements the leading practices for change management, future deployments risk continuing change management challenges that can hinder effective use of the new electronic health record (EHR) system.

Most users expressed dissatisfaction with the new system. VA's surveys showed that users were not satisfied with the system's performance and training. About 79 percent (1,640 of 2,066) of responding users disagreed or strongly disagreed that the system enabled quality care. In addition, users in GAO's structured interviews said the pharmacy-related system module presented challenges, such as incorrect medication orders and increased prescription processing times, which contributed to patient safety risks. Further, VA has not established targets (i.e., goals) to assess user satisfaction. Until it does so, VA lacks a basis for determining when satisfaction has sufficiently improved for the system to be deployed at additional sites. Such a basis helps ensure that the system is not deployed prematurely, which could risk patients' safety.

VA did not adequately identify and address system issues. Specifically, VA did not ensure that trouble tickets for the new EHR system were resolved within timeliness goals. It subsequently worked with the contractor to reduce the number of tickets that were over 45 days old. Nevertheless, the overall number of open tickets has steadily increased since 2020. Accordingly, it is critical that system issues be resolved in a timely manner. Additionally, although VA has assessed the system's performance at two sites, as of January 2023, it had not conducted an independent operational assessment, as originally planned and consistent with leading practices for software verification and validation. Without such an independent assessment, VA will be limited in its ability to validate that the system is operationally suitable and effective.

Subsequent to GAO's review, VA announced that it planned to halt future deployments of the new EHR system to focus on making improvements at the five sites currently using the system.

United States Government Accountability Office