

**FROM RESET TO ROLLOUT: CAN THE
VA EHRM PROGRAM FINALLY DELIVER?**

HEARING
BEFORE THE
SUBCOMMITTEE ON TECHNOLOGY
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MONDAY, FEBRUARY 24, 2025

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

The subcommittee met, pursuant to notice, at 3:01 p.m., in room 360, Cannon House Office Building, Hon. Tom Barrett (chairman of the subcommittee) presiding.

Present: Representatives Barrett, Luttrell, and Budzinski.

OPENING STATEMENT OF TOM BARRETT, CHAIRMAN

Mr. BARRETT. Good afternoon. The first Technology and Modernization Subcommittee hearing of the 119th Congress will come to order.

I want to thank the witnesses for being here today to discuss the Electronic Health Record Modernization (EHRM) program at the Veterans Affairs (VA). Appreciate your willingness to participate and help in this conversation.

Before we get to the business of today's hearing, I want to first congratulate and welcome my fellow Midwesterner, Representative Nikki Budzinski from Illinois, on becoming the ranking member of this subcommittee.

We had a great meeting in my office a few weeks ago and participated in a roundtable earlier already and really appreciate your partnership in this effort.

Your position as ranking member is a testament to your hard work for veterans and the goodwill you have built with your colleagues on both sides of the aisle and look forward to continuing to build that relationship together.

Our work on this committee will not always be easy, but our mission is critical. That is why I am deeply honored to chair this subcommittee and lead the House's oversight over VA's Information Technology (IT) systems, infrastructure, and modernization projects.

By way of background, I served 22 years in the United States Army before retiring and becoming one of the thousands of veterans in Michigan that receive their healthcare and benefits from the VA. I personally go to the Battle Creek VA Medical Center. I used the Montgomery GI Bill to pay for my college. I understand what veterans in Michigan and across the country need and expect from the VA.

I am going to use my leadership position here to make sure that VA's IT systems are working for all veterans and employees of the VA and ultimately making the VA a more effective and efficient organization.

Whether you are making primary care appointments, filling a disability claim, applying for education benefits, none of that happens successfully without good, reliable, and secure IT systems.

Perhaps the largest undertaking on this committee will be oversight of the VA's Electronic Health Record (EHR) and the efforts that are going into that today. It is the backbone of VA's healthcare operations.

The Electronic Health Record Modernization program is VA's project to replace its homegrown Electronic Health Record system with a commercial, off-the-shelf EHR from Oracle.

This subcommittee has spent hundreds of hours over the last several years conducting oversight over this program and exposing, reviewing, and analyzing its issues and its problems.

While I am new to this conversation, I have spent considerable time looking into this issue. I understand how important it is for us to get this right.

These consistent problems include system outages, patient harm, poorly functioning technology, budget overruns, reduced patient volumes, and more.

Because of these problems, former Secretary McDonough put the program in an indefinite pause in April 2023 to give VA and Oracle time to fix a long list of problems with the system.

The Secretary decided right before Christmas that VA was going to start the program up again in the spring of 2026 at Ann Arbor, Battle Creek, Detroit, and Saginaw in my home state of Michigan.

Two years ago, VA told this committee they had a lot of homework to do before they put this system into another medical center. Now VA is getting ready to turn in their homework.

I appreciate the opportunity to meet with both Oracle and VA several times before this hearing to discuss the problems that have plagued this system for years.

While I am not convinced that they have fixed all of the problems, I want to hear today from VA and Oracle directly to this subcommittee the progress that has come out of the last 2 years.

As the new chairman of this subcommittee, I am going to examine the facts, consult my colleagues on this subcommittee, and make my own judgments based on what progress has been made.

Here are some of the facts as they stand today.

First, VA is nearly 7 years into the original 10-year contract and the Oracle EHR has been implemented in less than 4 percent of medical centers.

Second, according to the latest surveys, 69 percent of users are dissatisfied with the system; 75 percent of users believe the system does not maximize their efficiency. I told someone earlier that the approval rating is less than that of Congress, and that is a hard thing to do.

Third, Congress has not received a schedule nor an up-to-date cost estimate to evaluate this program's current state. The only independent cost estimate we can rely on for what it will cost VA to implement this program is already 3 years old and it was over

\$32 billion. That is more than double VA's original estimate of \$16.1 billion.

Given these facts, the VA needs to demonstrate how this system has improved and explain why this program can succeed before starting up again.

I have confidence in the Trump administration and Secretary Collins to right the ship for veterans and their families, and I intend to work closely with him to deliver results. It is my commitment to this subcommittee and the stakeholders here that I will be firm but fair in the oversight we provide.

Thank you all again for being here today. I look forward to your testimony. I look forward to achieving the accountability that all of us should expect.

With that, I yield to Ranking Member Budzinski for her opening statement.

OPENING STATEMENT OF NIKKI BUDZINSKI, RANKING MEMBER

Ms. BUDZINSKI. Thank you very much, Mr. Chairman. I want to start out as well congratulating you on your chairmanship of the Subcommittee on Technology and Modernization and to say genuinely how much I look forward to working with you on this issue.

In addition, I am working on this issue as the ranking member because I think it is so important that we are ensuring that veterans and VA employees have the access to state-of-the-art technology that supports the delivery of healthcare and benefits for our veterans.

I also want to thank the witnesses for being here today to discuss the future of EHRM, this project, and for coming in a couple of weeks ago to help me get up to speed on a lot of these issues.

We had a robust discussion about the history and the current status of this project, which I really appreciated, and I look forward to working with all of you to support the progress that has been made to ensure that the EHRM moves forward in a safe and smart way.

In almost 2 years since the VA announced its reset of the EHRM program we have worked in a bipartisan and bicameral way with VA and Oracle to move the needle on this project.

In December, as the chairman mentioned, VA announced its intention to resume go-live activities with the first deployment happening in mid-2026.

I want to take this time to outline some of my concerns, many of them that I have shared that the chairman has actually already outlined, about the lack of progress being made by both VA and Oracle on a series of issues that ultimately impact our mission here, which is to address the betterment of veteran health and safety.

Last month VA briefed my staff that there were still dozens of outstanding recommendations from the VA's Office of the Inspector General (OIG) and the Government Accountability Office (GAO), recommendations that VA acknowledged it needs to fix, and yet little has been made on progress on those issues.

It seems to me that these recommendations need to be addressed before any other go-lives are allowed to occur. I hope to hear from VA about how it intends to address these open issues before its

planned resumption of go-lives next summer. I think that is important.

I am also concerned about the rollout of the 3b bidirectional interface intended to fix major issues with how Oracle supports VA's pharmacy operations.

I understand that 3b was deployed this weekend, but it sounds like it is suffering from some of the same issues that the system did during its initial go-lives.

The training is substandard and behind schedule, and staff are concerned that the solutions will not meet their needs.

The 3b solution was meant to solve problems that were identified at Mann-Grandstaff, the first site to go live in 2020. Yet here we are, almost 4 years later, and I am concerned that this is still not fully ready.

The lack of these fixes has caused VA pharmacy to hire additional people and use onerous workarounds to accomplish the same tasks they did in Veterans Health Information Systems and Technology Architecture (VistA). These fixes are desperately needed, but they need to be done right and we cannot afford any more half measures.

Also, I have some major concerns about how the recent reduction in force actions at the Department are going to impact VA's ability to move this project forward.

I know that Secretary Collins says these actions will not impact veterans' access to healthcare and benefits, but I do not see how cuts to a historically understaffed VA do not impact veterans and specifically the implementation of this program and our look ahead to these go-lives potentially in 2026.

I have questions about how many people in the EHRM Integration Office were terminated under the probationary employee purge, how many opted to take the "Fork in the Road," and how many others may have been purged through other methods.

I also have questions about how the hiring freeze is impacting EHRM. I expect the VA has a plan to compensate for these vacancies in this crucial program and I need to hear about that plan today.

My biggest concern as we continue overseeing the EHRM program is ensuring that veterans' health and safety remain the top priority throughout this implementation.

However, VA's track record has not always aligned with this commitment, oftentimes prioritizing speed over execution.

VA rushed into this contract, accepting a false assumption that it had to be on the same system to be interoperable with Department of Defense (DOD).

It rushed into system configuration without doing the standardization work needed to make the transition smooth.

It rushed to go live, even though we were in the middle of a pandemic and all the VA staff were already overworked.

It then rushed to move on from its initial failures.

VA even allowed DOD to rush them into another go-live just so DOD could finish its project.

We cannot allow VA to rush into the resumption of go-live activities using the same old playbook they have used up until this point. The Department must focus on improving their protocols,

training, and efficiency on the front end before hastily implementing another go-live.

I want to say, though, we should be working toward this go-live. I have all of these concerns. I think it is important they be articulated. I do want to get to a point where we can see this being successful, but I need to hear meaningfully how these concerns are being addressed before we can do this.

The focus should be on improving staff training, for example, to ensure the tools and skills to be able to use the software most efficiently.

The focus should be on establishing a structured project management timeline, something that I think the chairman has also brought up, with benchmarks and deadlines that must be met to push the project to the next step and eventually go live.

The focus should be on implementing a system that maximizes efficiency within the VA and allows providers to have seamless communication with other elements of the care delivery system.

We quite simply owe it to veterans and VA employees to ensure that they have the resources and technology they need for high-quality, safe, and effective care.

I look forward to this conversation.

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

Mr. BARRETT. Thank you, Ranking Member Budzinski.

I would like to introduce our witnesses.

From the Department of Veterans Affairs we have Dr. Neil Evans, acting program executive director of the Electronic Health Record Modernization Integration Office.

Did I get all that right, sir? All right.

From Oracle we have the honorable Seema Verma, executive vice president and general manager of Oracle Health and Life Sciences.

From the Government Accountability Office we have Ms. Carol Harris, the director of IT and cybersecurity at GAO.

From the Office of Inspector General we have Mr. David Case, the acting inspector general of VA OIG.

I ask the witnesses to please stand and raise your right hands.
[Witnesses sworn.]

Mr. BARRETT. Thank you.

Let the record reflect that all witnesses have answered in the affirmative.

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

STATEMENT OF NEIL EVANS

Dr. EVANS. Thank you. Good afternoon, Chairman Barrett, Ranking Member Budzinski, and distinguished members of the subcommittee.

I want to thank Congress and this subcommittee for the opportunity to testify today. VA recognizes and appreciates your shared commitment to veterans and your support for VA's Electronic Health Record Modernization efforts.

This testimony comes at a pivotal moment. With new leadership at VA there is renewed commitment to ensuring that every aspect of our EHR modernization effort is reevaluated.

Secretary Collins made it clear in his confirmation hearing that the status quo is not acceptable. Every previous decision, policy, and process must be thoroughly reviewed to ensure that it aligns with our core mission—providing veterans with the highest quality care through a system that works for them, not against them.

Accordingly, VA remains committed to implementing modern interoperable health information technologies across the entire VA healthcare system.

The Federal EHR, which is the set of technologies we are deploying through our Electronic Health Record modernization efforts, works in concert with biomedical devices and other critical health information technologies, and these together will serve as key enablers behind VA's ability to deliver comprehensive high-quality healthcare to veterans for many years to come.

Between 2020 and 2022, VA deployed the system at 5 VA medical centers, 22 community-based outpatient centers, and 52 remote VA sites that serve those clinical locations, for example, call centers, telehealth hubs, and more.

In April 2023, veterans and staff had made it clear that the system was not meeting expectations. With bipartisan support from this committee, and consistent with recommendations shared by GAO and OIG, VA announced a comprehensive program reset, pausing further deployments of the system and taking time to address issues that have been identified by users at active sites.

VA also identified the reset period as an opportunity to complete foundational enterprise work necessary for long-term success, operating a far more centralized set of technologies than VA's existing Electronic Health Record.

Finally, VA used the reset period to prepare for and then successfully complete a joint VA-DOD deployment of the Federal EHR at the Captain James A. Lovell Federal Healthcare Center (FHCC) in North Chicago, Illinois, just under a year ago in March 2024.

Relying on a data-driven approach to assessing progress, VA demonstrated improvements in system stability, program processes, veteran and VA staff experiences, and finally, health system outcomes, including quality, clinical productivity, and revenue management.

In light of that demonstrated progress, on December 20 of 2024, VA announced that it was going to restart Federal EHR deployment efforts initially at the four aforementioned Michigan facilities in Ann Arbor, Battle Creek, Detroit, and Saginaw.

I should add this: VA acknowledges that there is still improvement work to be done, as you will likely hear from GAO and OIG, and we agree. Improvement efforts are not stopping. We are simply, in addition to those improvement efforts, resuming deployment work in parallel.

Examples of ongoing improvement efforts include migration of the system to Oracle's cloud infrastructure for improved performance of the system and access to Oracle's next-generation technologies.

Establishment of a Federal EHR system baseline and associated processes, which is a critically necessary step in support of improved standardization across VA, which will help lessen staff frustration, deployment delays, and cost.

Further training improvements to better support user adoption. Standardization and consolidation of user roles in the system, which will simplify training and everyday use of the system for VA staff.

Completion of crosscutting projects that we have called “big rocks,” which include reassessing system design choices in order to deliver a better and more efficient user experience.

There is much more.

Meanwhile, current state reviews, the initial activities necessary to deploy the Federal EHR, have been in progress at the Michigan sites mentioned earlier since the first week of January, and those are going well.

We are also working closely with Veterans Health Administration (VHA) health system leaders and with Oracle Health to determine deployment plans beyond the Michigan sites. These decisions will support the iterative development of a revised integrated master schedule in addition to updated cost estimates for this project.

Through the efforts of the recent program reset and through our collaboration within VA with our end users, with leadership, and with veterans, and outside of VA with DOD, Federal Electronic Health Record Modernization (FEHRM), oversight bodies, and our vendor partners, we are seeing movement—yes, even momentum—in the right direction. By sustaining these efforts our velocity should increase over time.

VA remains optimistic to realize the successful implementation of the Federal EHR across VA. I appreciate this opportunity to testify and am thankful for this committee for your commitment to serving veterans, and look forward to working with you over the course of the 119th Congress.

We look forward to responding to any questions you might have.

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

Mr. BARRETT. Thank you, Dr. Evans.

The written statement of Dr. Evans will be entered into the hearing record.

Ms. Verma, you are now recognized for 5 minutes for your opening statement on behalf of Oracle.

STATEMENT OF SEEMA VERMA

Ms. VERMA. Thank you, Chairman Barrett, Ranking Member Budzinski, and distinguished members of the subcommittee. Thank you for the opportunity to speak with you today.

The VA’s EHR Modernization program is at a turning point as we begin work to restart deployments in Michigan. The preparations will take place this year, with the deployments occurring in early 2026.

I say turning point because we have several factors that have come into alignment.

First, a new administration that is committed to accelerating.

Second, we have completed countless optimizations and improvements, including with pharmacy just this weekend, that have improved productivity and are trending user satisfaction in the right direction.

Third, Oracle is making a number of investments to make implementations go faster and smoother, improving training and support, while also investing in modernization of the EHR to provide a state-of-the-art experience for providers.

Fourth, Oracle is migrating VA to our cloud to unlock a slew of new technologies that VA can take advantage of while enhancing cybersecurity.

We believe the program is ready to accelerate deployments in 2026.

We are working closely with Secretary Collins, Dr. Evans, and the VA team to figure out the right pace of deployments' timing and schedule, even meeting at the VA just a few hours ago.

As the committee considers the path forward, I think the most important thing to recognize is that the program and the EHR deployed at the first five sites is in a vastly different state than it was nearly 3 years ago, before Oracle acquired Cerner.

There have been many changes to address the challenges of the past. My written testimony details—perhaps painfully for those of you that read it all the way through—the amount of change that Oracle has brought to the program.

It performs reliably without severe outages or frustrating crashes for users. It has had more than 3,000 functional changes made during the reset to make the EHR easier to use, simplify workflows, and enhance functions like pharmacy.

Training has been overhauled. The new training program worked very well and received high marks from the employees at Lovell Federal Health Care Center in Chicago when it successfully went live last year.

Revenue collections and productivity are returning and in some cases even exceeding baselines from predeployment averages.

Patient safety continues to be a top focus and we have instituted several new procedures with VA to make sure safety is always at the forefront.

Users filing tickets with potential patient safety concerns have dropped 80 percent since our acquisition of Cerner.

The EHR has new opioid tools, registries, and clinical decision support tools that enable greater patient safety, close care gaps, and help improve outcomes.

Finally, when veterans receive care in the community their health records can be accessed by community care providers and updated to ensure VA providers have a complete view of the care received outside the VA system.

Now, there are still challenges and work that we will continue to do to improve the system to address the VA's unique needs. We expect the same of VA in terms of focusing on standardization, quick decision-making, and displaying a strong commitment to adopting the new EHR.

All of this work will continue in parallel while we prepare for the next round of deployments and none of the optimization work will slow us down.

Looking into the future, as we move this system to the Oracle cloud, we will have the ability to bring even more modern features to the EHR and eventually upgrade it to our new cloud-based EHR infused with Artificial Intelligence (AI).

The narrative about this program is largely negative. We understand that first impressions last, and the first impression in Spokane and the other initial sites was not good.

We are not Cerner that deployed at those sites. The totality of updates, enhancements, investments, and innovations to the EHR show that this is a dramatically improved system from what was originally deployed in Spokane in 2020.

We are encouraged that everyone involved wants to see this program on a path to success or get it back on course, as Chairman Bost and others have said, because I know we all agree that those who have made sacrifices for all of us deserve modern technology to help make their experiences at the VA more efficient, safe, smooth, and ultimately aid the providers that serve them in delivering high-quality care that improves the health of veterans.

Oracle stands ready and committed to getting this done on behalf of our nation's veterans. Thank you.

[THE PREPARED STATEMENT OF SEEMA VERMA APPEARS IN THE APPENDIX]

Mr. BARRETT. Thank you, Ms. Verma.

The written statement of Ms. Verma will be entered into the hearing record.

Mr. Case, you are now recognized for 5 minutes to deliver your opening statement on behalf of OIG.

STATEMENT OF DAVID CASE

Mr. CASE. Chairman Barrett, Ranking Member Budzinski, and subcommittee members, thank you for the opportunity to discuss the OIG's oversight of EHRM.

Since April 2020 we have published 22 reports on VA's modernization program. More than half uncovered significant patient safety concerns, such as problems with medication management, pharmacy operations, and patient care coordination.

The others identified deficiencies in program and contract management, including poor cost estimating and reporting.

We have remained focused on EHRM during VA's reset, because an updated EHR has a central role in providing high-quality healthcare to veterans.

I want to discuss four main unresolved issues previously identified by OIG teams that VA should address as it emerges from reset to the next wave of EHR deployment.

First, while VA has addressed many OIG-identified patient safety issues, more work is needed to ensure that the veteran's experience with a new EHR fulfills its promise of timely access to seamless high-quality care.

For example, the new EHR has had serious issues with handling scheduling changes and missed appointments. This includes VHA allowing mental health staff at new EHR sites to make fewer attempts to contact no-show patients compared to legacy sites, creating a different standard of care between sites.

VHA should address barriers created by software deficiencies without compromising patient care and engagement standards.

Second, in February 2024, I testified to this subcommittee about pharmacy-related-patient-safety issues facing every VHA provider.

While VA has made progress on some aspects of the pharmacy program, critical issues remain unresolved.

For the foreseeable future, legacy EHR site leaders must have providers perform manual medication safety checks for patients who have received care at a new EHR site due to concerns with the automated process.

These manual safety checks are time-consuming and rely on the vigilance of pharmacists and frontline staff. Facilities using the new EHR require greater numbers of staff and supplemental resources to manage the significant drop in productivity.

Third, it is essential that the new EHR system be consistently accessible. In September 2024, the OIG found that VA procedures lacked sufficient controls to prevent, respond to, and mitigate major performance incidents.

While we recognize VA has improved system reliability, there are still incidents occurring every month.

Given the stress that the system will likely experience during the next deployments in larger facilities, VA must be ready to handle any future instability and equip providers with the tools to continue working when the system is degraded or inoperative.

Finally, VA must develop and maintain an integrated master schedule to clearly track and project the program's cost to completion. The 2026 deployments are on a much larger scale, with a greater number of variables and tasks to plan and execute. Also, VA's ability to train staff and resolve requests for help may be challenged.

Additionally, there may be many developments over the next year that could affect the schedule, and cost, and the veteran and provider experience. A reliable master schedule will enable VA to be fully transparent with Congress and their stakeholders about what needs to happen for the successful rollout of the new EHR in Michigan and other sites nationwide.

Our recommendations on the integrated master schedule and project costs have been open for several years, paused essentially because of VA's reset.

Given the restart, VA should get them done. Without them, costs will be uncertain, risks may not be mitigated, and efficiencies could be lost as tasks dependent on other actions are not fully considered.

In conclusion, EHRM's success is dependent on VA's transparency, careful planning, and the recognition and remediation of patient safety issues.

Updating the EHR is critical for VHA's ability to deliver healthcare in the future, and the OIG will continue to focus our resources to provide VA with timely recommendations that can help them and Congress ensure this transition succeeds.

Chairman Barrett, this concludes my statement. I would be happy to answer any questions you or other members may have.

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

Mr. BARRETT. Thank you, Mr. Case.

The written statement for Mr. Case will be entered into the hearing record.

Now we will go to Ms. Harris.

You are now recognized for 5 minutes for your statement. Thank you.

STATEMENT OF CAROL HARRIS

Ms. HARRIS. Chairman Barrett, Ranking Member Budzinski, and members of the subcommittee, thank you for inviting us to testify today on the EHRM program. This is VA's fourth attempt at replacing its legacy Electronic Health Record system.

As requested, I will briefly summarize our recent work on VA's progress to implement the system and the challenges it faces moving forward.

As you know, VA provides healthcare services to roughly 9 million veterans and their families and relies on the legacy system called VistA to do so.

In June 2017, the Department initiated the EHRM program to replace VistA and deployed the new system to six of its medical centers at a cost of about \$12.7 billion.

The rollout of the system has been met with poor user satisfaction, change management issues, and slow resolution of trouble tickets, among other things. Given the magnitude of user concerns, VA paused deployments in April 2023 to improve the system and address those concerns.

On December 20, 2024, VA announced it would resume deployments to four Michigan sites in mid-2026. This afternoon, I will highlight four key points from our work.

First, VA lacks a strategic roadmap to get EHRM where it needs to go.

During the 20-month deployment pause, a significant part of VA's improvement efforts focused on the more than 1,500 system-configuration changes needed to support user needs and standardize workflows.

VA also closed many of its highest priority patient safety enhancement requests.

These are all important accomplishments, but there are still about 1,800 complex configuration changes and a number of user-driven projects that need to be completed.

For example, referral management lacks functionality and intuitiveness for users, and VA will be working to simplify the existing process and standardize referrals across the enterprise.

All this is to say that VA has been in reactive mode during this reset period, putting out fires with no real plan for how to move forward strategically.

Two pieces of information needed to inform such a plan are the cost and schedule estimates. This leads to my second point—that, unfortunately, Congress and VA senior leaders are relying on estimates that are severely outdated and incomplete.

Existing cost estimates range from VA's \$16.1 billion to an independent one of almost \$50 billion. While the latter is more realistic, neither reflects the many changes and delays to the program.

Also, planned system deployment at four additional sites results in about 94 percent of VA's total medical centers without the new system as of mid-2026.

With 2 years left on the Oracle Cerner contract, it is vitally important that VA update these estimates to inform decision-making.

Another key piece of information needed to inform a strategic roadmap is the results of an independent operational assessment, or an Independent Verification and Validation (IV&V) test, which we recommended VA conduct in 2023.

An IV&V is an evaluation of the system end to end to determine whether the system is operationally suitable. In other words, it systematically catalogs these deficiencies of the system and answers the question of whether or not the system will realistically meet mission need.

This test is considered an IT best practice and one of the reasons why DOD was able to successfully deploy the Oracle Cerner system.

Now to my final point. VA's user surveys continue to reflect general dissatisfaction with the new system. As of September 2024, about 70 percent of respondents were not satisfied with the system; about half continued to disagree or strongly disagree that the system enabled them to deliver high-quality care.

Seventy-five percent disagreed or strongly disagreed that the system made them as efficient as possible. While there was a slight uptick in satisfaction compared to 2022, these numbers are still just too low.

Moving forward, it will be critical for VA to address these issues along with our other eight open recommendations as soon as possible. Doing so will position VA to more effectively deliver a modern health record system as veterans deserve.

That concludes my statement. I look forward to addressing your questions.

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

Mr. BARRETT. Thank you, Ms. Harris.

The written statement of Ms. Harris will be entered into the hearing record.

We will now proceed to questioning, and I recognize myself for 5 minutes.

Ms. Harris, thank you again for your testimony. Given all that is happened with this program since its last cost estimate in 2022, I know you mentioned this in your opening remarks, but can Congress rely on the estimate of \$32.7 billion over 13 years to fully implement the Oracle EHR at VA? If not, why not?

Ms. HARRIS. No, Congress cannot reliably rely on this estimate. There have been too many changes to the program. There obviously was this period reset over a 2-year period with additional work being done and none of that has been accounted for within the cost estimate.

That estimate needs to be updated before we proceed, because, again, when you take a look at how much has been sunk, 12.7 billion already, and we have only deployed to six sites, if you were to just multiply that across the 94 percent of medical centers that have not had the same system, I mean, that could be in the hundreds of billions of dollars potentially.

Mr. BARRETT. Thank you.

Second question for you. The GAO has been publishing reports about the EHRM program and making recommendations to VA on

how to improve it since 2020. You have been involved in each of those.

How many recommendations have you made? How many have been resolved? I know you said there are a number that are outstanding. Can you give us an update on the number of recommendations versus those that have been resolved so far?

Ms. HARRIS. We have made a total of 15 recommendations in our previous work. We have an additional three that we have with a draft report that is out for comment at VA at this time. That would be a total of 18 recommendations. Of those 18, one has been implemented.

Mr. BARRETT. Which one was that?

Ms. HARRIS. That was one was related to, I believe, data migration.

Mr. BARRETT. Okay. Thank you.

Your most recent report said that the program has made incremental improvements but there is much more work to be done. Is that related to those recommendations or do you have other thoughts on the incremental improvements that have been made?

Ms. HARRIS. I mean, the incremental improvements have been related to those system configurations that VA has completed, so roughly 1,500 complex configuration changes.

I know that there have been more that are not complex that have been made during this reset period. There is still a significant number of configuration changes that need to be made in addition to these user-driven projects, that those are still outstanding, that need to be completed before the deployment at Michigan in mid-2026.

Mr. BARRETT. I know you mentioned what I would consider lack of satisfaction or the reports as they surveyed those that are interfacing with the system. Anywhere from low 70's to low 80's are seemingly frustrated or feel like the system is not meeting their needs or obligations or desires.

Do you have any information as far as, like, an industry standard outside of government or in other health systems as far as the satisfaction among folks with electronic health record systems?

Ms. HARRIS. We do have that information. I do not have that with me at this time, but I am happy to work with your staff in providing that.

I do believe that the industry numbers for the Oracle Cerner system, it is higher than what we are seeing at VA, and at DOD the numbers are a little bit higher than VA. Overall, they are not super high compared to others, is my understanding.

Mr. BARRETT. Okay. Thank you.

In your opinion, does VA have a complete understanding of all the problems with the system? Do they have a plan to resolve them?

Ms. HARRIS. I do not believe they have a complete understanding of all the issues. That is why this IV&V test is so critical, because it is a systemic look at the system once it is in the live environment.

When it is deployed, then the testers go in and they observe the users actually use the system from an end-to-end perspective, they catalogue all of those issues. That would be a way for VA to iden-

tify the comprehensive list of issues and then to prioritize from there.

They have not done that. They have done pieces of those types of tests, but not from an end-to-end perspective.

Mr. BARRETT. Quickly, I only have about 30 seconds left. I know it is the position of VA and Oracle that, well, we have got this in a live environment so we do not need that end-to-end review.

What would you say to that position that they seem to feel is testing it in a live environment?

Ms. HARRIS. I mean, I would disagree with that. It is an IT best practice. It is also something that DOD did when they deployed their Oracle Cerner system. It was one of the reasons why they were able to successfully deploy.

Mr. BARRETT. Okay. Thank you.

I would now like to recognize Ranking Member Budzinski for your questions.

Ms. BUDZINSKI. Thank you, Mr. Chairman.

I had mentioned this in my opening. I am concerned about any potential impacts with the recent announcements of some of the positions, the workforce cuts to the VA.

Is that going to then affect the implementation of the go-lives that we have coming up with the EHRM system?

I think my questions are really for Dr. Evans in this first round.

Did you lose anyone in the probationary employee purge? If so, how many?

Dr. EVANS. Yes, we did lose several employees with regard to folks who were let go who were in their probationary period. I believe the number currently is eight.

Ms. BUDZINSKI. Eight. Okay.

Then how many people in the EHRM Integration Office took advantage of the "Fork in the Road" email that was sent?

Dr. EVANS. 16 staff members signed up for the deferred resignation program.

Ms. BUDZINSKI. Okay. Then how many vacancies did you have before these cuts started?

Dr. EVANS. Our organizational chart is approved for approximately 330 staff, and we are at approximately 250.

Ms. BUDZINSKI. Okay. Based on that, can you kind of speak to how confident you are that you can move forward successfully with these staffing changes? Or how does that impact how you are looking at the potential for success for a next round of go-lives?

Dr. EVANS. I think I would start by saying, first of all, this is a priority. I mean, as we have heard here in the room today, our successful implementation of the Federal EHR across VA is a priority of the VA and is certainly a priority of current VA leadership.

It is important to recognize that it is not just the government staff of the Electronic Health Record Modernization Integration Office who are going to be the folks who actually make this happen.

I am super proud of every one of them and the work that they are doing to move this program forward. They have been putting in a tremendous amount of effort over the reset. Now, as we are getting restarted in Michigan and beyond, they are doing a tremendous amount of work.

We also rely on staff from the Veterans Health Administration, from the Office of Information Technology, from several of our vendor partners who work alongside of us and really across in the field at the Veterans Integrated Services Networks (VISNs). It takes many, many more than the folks in the program office to successfully implement the EHR.

Ms. BUDZINSKI. Okay. Thank you.

My next set of questions is really focused around the restart that was put into place and then obviously this recent news about going live with some sites in Michigan in mid-2026.

My question, just to start again with Dr. Evans, is just can you talk a little bit about how confident you are, given what you have shared and what has already really been shared with the panel, that the VA and Oracle are ready to deploy this system and that we will not hear the same concerns that the first six sites raised?

Dr. EVANS. Yes. I think good program management and sort of a realistic approach to implementing—I mean, I think we should step back and recognize that this is a really complex, transformative change. We are changing effectively all of the information technologies that support healthcare delivery at our sites.

I feel confident that we are in a much better place and completely agree with the fact that what we are deploying, the product we are going to be deploying in Michigan, the set of technologies and how they are configured to meet VA's needs, it is an entirely different set. It is very different than it was with the initial sites.

I do feel confident that we are entering Michigan having learned a lot, having listened to our end users. That does not mean that we can let up one bit with regard to our vigilance of how do we deliver with excellence in Michigan.

Ms. BUDZINSKI. I think maybe drilling down a little bit more, like, are there metrics that you are using that give you the confidence to say that?

Dr. EVANS. Yes. We established a set of metrics that we used to demonstrate our progress during the reset. They were looking in four categories.

One was essentially how stable the system was, the technical stability of the system.

The second category was looking at metrics around the program processes that we use to support end users, how well are we supporting the need for change and for adjustment to the system and support for our end users.

The third was around the veteran and VA staff experience around a host of pieces of the application.

The fourth was around the actual impact of the system on health system operations, our revenue collections, healthcare quality, et cetera. We have been tracking those metrics through the reset and we will continue to track them as we move forward.

Ms. BUDZINSKI. I have run out of time, so I yield back. I have other questions.

Mr. BARRETT. Sure. Thank you. We will do another round after this.

Mr. LUTTRELL.

Mr. LUTTRELL. Thank you, Mr. Chairman.

Ms. Harris, you look like you want to respond to that, what Dr. Evans just laid out for us.

Ms. HARRIS. Sure. I mean, there has been a tremendous amount of work that was done during the program reset period. There is no doubt about that. There are a lot of very important accomplishments.

At the same time, there is still a very large amount of work that needs to be completed with regard to the continued changes to the system, the configuration changes, as well as the user-driven projects.

That, in combination with what they are doing in parallel, which is getting these four sites ready to go live. I mean, that is going to take a tremendous amount of resources. We know within, like, the FHCC, for example, in Chicago that there were some resources that were redirected from that system work to get the sites ready.

Our concern is, in the absence of an integrated scheduler, as Mr. Case has been talking about, as well as a cost estimate to really know what it is really going to take to get to that go-live, it is just a big unknown.

Mr. LUTTRELL. Thank you, Ms. Harris.

Dr. Evans, why did not the VA conduct an IV&V test or assessment? Considering it worked for the DOD, I am curious why.

Dr. EVANS. Yes. It is a good question.

First of all, I think we have spent—we have had a lot of attention in a very similar fashion to what an IV&V test would do with our staff—and, frankly, staff from Oracle Health—spending a considerable amount of time on the ground at our live sites observing workflows from end to end and categorizing where the issues are.

Those issues are the change requests that we have been working through during the reset. You heard of the fact that there are 1,800 still that we are working through at the moment. Those are the change requests that have—

Mr. LUTTRELL. Would that assessment have problem solved instead of doing it the way that we did conduct it? I only ask that because we failed miserably. Would that assessment have solved that problem?

Dr. EVANS. I mean, I do not think that it would have—

Mr. LUTTRELL. We are, help me out with the numbers here, on a \$10 billion project, we are \$12.5 into it, projected to go to \$50 billion.

Dr. EVANS. Here is what I would say, is I think that with regard to identifying the issues that we need to fix, I think we have had an awful lot of help from our end users—and, frankly, from our staff—in identifying what those issues are that we need to fix.

I would welcome a third-party assessment of what additional issues might be discovered. I do not think we are going to find a significant set of surprise issues that we are not yet aware of.

Mr. LUTTRELL. I would imagine there is a whole laundry list of them, considering what the OIG just said.

Ms. Verma, how long have you been in your position?

Ms. VERMA. I have been in my position for about a year.

Mr. LUTTRELL. Of course. Cerner—Oracle bought this project from Cerner. That is the best way to say that, correct?

Ms. VERMA. Oracle acquired Cerner.

Mr. LUTTRELL. Acquired it?

Ms. VERMA. Yes.

Mr. LUTTRELL. Then I am sure they were very well aware of the problematic issues that existed inside the EHR?

Ms. VERMA. We have gotten more fully acquainted with those, yes.

Mr. LUTTRELL. I am sure you are, considering where we stand today.

What is your—because you said update costs. I am curious, what is Oracle projecting the cost of activating the EHR, not in 2026 but downstream in all 172 facilities, plus the satellite campuses that you and I spoke about, Dr. Evans? When everything is up and running what are we going with, considering we are well over our original budget?

Ms. VERMA. Just from a taxpayer perspective and former government official to understand the need to really be very careful with how we are using resources.

Just a couple of numbers. I heard the \$50 billion estimate. I think that is an outside group that we have not validated so we do not agree with that estimate.

Mr. LUTTRELL. You cannot say you disagree with \$50 billion and it costs \$49?

Ms. VERMA. Agreed, but I do not think it needs to go to that level. I think there are a lot of opportunities for us to figure out how to run this program more efficiently.

The other thing I would say is that out of the \$10 billion, Oracle has received \$5 billion. These are some of the other estimates. Not all of that has gone to Oracle.

I do think that the way to make sure that we are using taxpayer dollars efficiently, there is a couple of different things that we can do.

Accelerating is really important. The longer the program goes on, the more that it is going to cost.

There is also opportunities to do things around standardization. Like we have heard a lot of discussion about that. When we standardize, we also reduce the number of additional configurations. Even if we can get done some of the work around optimization, that also will decrease later on some of the additional work that happens—

Mr. LUTTRELL. I am sorry, Ms. Verma. I apologize.

Mr. Chairman, are we doing—

Mr. BARRETT. [Inaudible.]

Mr. LUTTRELL. Forgive me. I will circle back with you.

Thank you, Mr. Chairman.

Mr. BARRETT. Thank you.

I recognize myself again.

Dr. Evans, IV&V you said essentially—not to paraphrase what you said—but more or less that your users have accounted for what that would do by utilizing the system and providing change requests to that.

To me, not being an IT professional, that sounds a lot like we are going to put it out there, and even though we know it is not fully operating properly we are just going to wait for people to tell us

where it is broken and wait for it to then roll in for the fixes that do that.

If we had planned this from the beginning and done that thorough analysis that Ms. Harris had described, would it have prevented that need for so many changes that are now backlogging the system that are putting us in the position of delay that we are in currently?

Dr. EVANS. I think—so a couple things. When we look at the DOD's experience deploying the EHR, they had a very similar experience. Though they did complete an operational test, an Operational Test and Evaluation (OTE) exercise to determine the suitability of the system, they did not do that until after it was already in production and was being used at several sites, when they were having very, very similar problems to VA's initial problems. That is point number one.

Point number two, I completely agree with you, end users are one piece of the puzzle, but bringing experts in who can watch and observe and provide insights that an end user themselves might not be able to sort of provide from the foxhole in which they are is valuable.

We have been able to do that with experts from the program office, from our counsel, experts at the national level in VA, from Oracle Health, from our research community who have very carefully studied different parts of our implementation.

Again, I think we have learned quite a lot not just from end user reports, but also from external bodies who have looked at our implementation.

Mr. BARRETT. Okay.

Ms. Verma, you said that a big portion of reducing costs is accelerating the implementation of this program. While I suppose I agree with you from a strictly cost standpoint, if we were to just implement this everywhere maybe we could save some money, but I do not think that you would have the confidence of this committee—I am not going to speak for the other members—but certainly from my own perspective given the track record that is been out there so far.

Asking us to endorse the idea of accelerating this when it has not proven to be adequate—and that is putting it in the most diplomatic way I can—what can you give us to reassure this committee that in fact accelerating is the appropriate thing to do when the last time we implemented this we had to go into an immediate freeze because it was so poorly implemented?

Ms. VERMA. I think we are in a different place than where we were 5 years ago, and even just the last 18 months. If we look at the track record, even in respect to testing and independent evaluation, if we look at the go-live in Chicago, that has gone well.

If we look at even this weekend, I know time will tell, we will get a better sense of the impact on our providers, I think, if we just look at sort of in the recent history that we have actually seen some good, successful—

Mr. BARRETT. Would not you agree that the go-live in Chicago was done with a significant assist from the Department of Defense working in that regard as a spotter on the weight bench, if you will?

Ms. VERMA. I think that the DOD certainly helped. The VA was there, the VA led that, and I think there were a lot of lessons learned that will help them also take some of those lessons in going forward.

There is still a lot of—if we look at the history in terms of the impact that it has had, I mean, even on productively there are some places where we have actually increased productivity in some places.

We have also seen some of the work that we are getting in terms of closing care gaps, some of the new tools that we have been able to provide for providers on the front lines that have actually helped them deliver more safe care in terms of opioids, for example. The clinical decision support.

Those are things that I think are definitely helping.

Mr. BARRETT. I heard that in your opening remarks and I appreciate the focus on that. I am curious why we do not have—to Mr. Case's point—we do not have a standardized schedule as to when this is going to be implemented.

To Ms. Harris' point, we do not have that end-to-end review and analysis of where the pitfalls and gaps are. If the answer is to go faster, I do not think that a reasonable person would view that that is the most appropriate thing.

I guess, with 15 seconds left, how can you reassure us that that would be the case?

Ms. VERMA. Look, we are committed to making sure that this works. I think the history shows, the recent history, that things have improved. The VA is paying for hosting, they are paying for a lot of things that they are not using.

If we look at where we have been just over the last 12 months, I think things have started to turn around, they have started to go well.

We are committed to getting the optimization work done as well as in parallel trying to advance some of the work in terms of going forward at the other sites.

Mr. BARRETT. Okay. Our version of what good looks like might be ought of sync with one another. I will be curious to ask more.

I want to recognize Ranking Member Budzinski again for 5 minutes.

Ms. BUDZINSKI. Yes. Thank you very much.

I actually want to kind of just build on what you were talking about, about accelerated deployment.

What would it take for Oracle and the VA to be able to accomplish that? If you could kind of further—both Dr. Evans and Ms. Verma—if you could elaborate on that.

Ms. VERMA. I think from my perspective one of the biggest things that we need to do is standardize. If we get to sort of a standard sort of configurations, that is going to really help a lot.

Ms. BUDZINSKI. I know you have said that a lot, not to interrupt you, but I think one of the things that I have come to understand and appreciate in some ways about the VA is every clinic is different, every Community Based Outpatient Clinic (CBOC) is different. The uniqueness of it, is that a bigger challenge within the VA than it is perhaps with the DOD when you say standardization?

Ms. VERMA. If we think about the original goals of the program was to create some standardization so that when veterans go into one site they are getting a similar level of care, a similar quality, a similar standard of care.

In order to do that, we need to make sure we are all operating in the same way, and that starts with having the IT configured in a way that is standard.

That, I think, that in and of itself will create a lot of optimization, even if we think about a lot of the configurations and a lot of the different requests, because I think there is the expectation that we are going to do this in a bespoke way.

That is actually contributing to more complexity and increased costs, increased difficulties with training and support if you are doing something different at every site.

When I say that I think we can go faster, that is predicated on having standardization, that is key to be able to go forward—

Ms. BUDZINSKI. It is not—and, obviously, I believe in this program, so I think that I believe in the standardization concept. That is what we are moving toward. I am more asking you the unique challenges within the VA to moving to something that is standardized that is something a little different than the DOD.

Ms. VERMA. Yes. I think one of the things that—and we have talked about this and been working on that—is how can we give more support to the providers on the front lines, making sure that they have adequate training.

I think that the work that we did in Chicago was a good example of that. Not only did they have a lot of training in advance, they also did elbow-to-elbow training so that when it went live there were people circulating there that could give them support. That is not something that should just happen on the first day or the first 3 days. It still may take about even a month later.

We find that a lot of the requests and a lot of the changes that people are requesting, sometimes those are rooted in they may not understand how to use the system. If we actually give them more support and more training that they actually are not going to request a change in the actual system. I think that is also a piece of it, the standardization and more support, more training.

Ms. BUDZINSKI. Dr. Evans.

Dr. EVANS. Yes. I think—and I think the original question that you asked was—how do we feel confident about the ability to accelerate and what does that look like?

I think I would start my remarks by saying that I just want to—I mentioned it in my opening statement, but I would like to underline it. VA is and agrees with the recommendation that we do need a revised integrated master schedule and a life cycle cost estimate regarding this program. Hundred percent agree.

When we made a decision to start our work in Michigan, we made that decision very explicitly. We spoke to this committee about that decision to say we are making a decision to start moving toward Michigan with the understanding that we need to in parallel be working on the schedule, the integrated master schedule, for what things look like to get to Michigan, what things look like to get to the sites thereafter, to the end of this current contract, and to the end of our delivery.

We agree and are working on the schedule.

I think one of the things that I sense that you are trying to get at, which I would very strongly agree, is that the details matter when it comes to executing a complex project like this. The details matter. That is what we capture in an integrated master schedule.

We are at a very different spot in the program than when this program began many years ago. And so sort of snapping the chalk line and starting to build that schedule iteratively, we have heard that recommendation from both GAO and OIG and we will do it.

Ms. BUDZINSKI. That is great. It was going to be what my next question, is getting that schedule. It is great to hear that that is something you would be open to.

Just because I have only have a few seconds left, can I ask you really quickly, Dr. Evans, about the 3b pharmacy solution? That was rolled out, I know I talked very briefly about it, but can you generally just say how did it go this weekend?

Dr. EVANS. It was rolled out this weekend. The block upgrade, which is twice a year, we introduce significant software upgrades to the Federal EHR. That occurs in February and August every year. This block upgrade runs from the 21st to the 28th. Much of it was implemented over the weekend. There were a few small issues addressed this morning, but overall, it is a little too early to tell, but it seems like things are going well with regard to 3b.

Mr. BARRETT. Thank you.

Mr. LUTTRELL.

Mr. LUTTRELL. Curious to hear what you just said about the pharmacy, because Ms. Verma said it was going great, which it kind of works in conflict here.

Can you elaborate a little bit more, Mr. Evans, on how that pharmacy—when it was activated this weekend, because I want to go back to Ms. Verma, because, again, I want to kind of unpack the suitcase on this.

Dr. EVANS. Sure. I think, probably as you and the committee are aware, it has been a long journey to deliver this particular improvement. When we first went live with the pharmacy capabilities to support VA, and again, remember pharmacy operations and VA are a little bit different than in a typical commercial healthcare environment. VA runs both the healthcare delivery organization as well as the pharmacy fulfillment organization, both the pharmacy that is dispensing the medication and the providers and staff who are ordering those medications.

As we deployed pharmacy at the original sites, the pharmacy community came and identified initially a set of seven issues that they said were absolutely critical for us to deliver before we went live at a level-1 high complexity site.

Of those seven capabilities, one of them happened to be numbered three, and proved the most challenging. We had hoped to have that delivered last February. There were some issues with it and there has been a lot of work, including a very different approach to how we did development and testing and evaluation of 3b to get it delivered this week. I just—in the interest of full transparency, as with any—

Mr. LUTTRELL. We appreciate transparency.

Dr. EVANS. Yes. With any IT go-live, when something hits the light of day, you might find something that you—you may have done absolutely extensive testing and there may be some small issue that you identify, which has been quickly fixed this morning.

That is what I am talking about. I would say overall it is great. I would agree that it is great that we are live with 3b now, and that we are going to be able to see how that works in the real world over the next week and the following weeks. That is good news.

Mr. LUTTRELL. Ms. Verma, I know you are representing your company and you are giving us kind of a grandiose expectations of the success that is currently happening. We are in the basement. We are in the basement. We are rock bottom. We actually have failed totally because we are in pause.

Can you give me a statistical probability of success in the next 2 years from Oracle? If it does not, if it is not successful, the only person that is going to be sitting here taking the punches is him. I want to hear from you and Oracle if you think where we—I need to hear this out loud. Where we are currently, when we go live in '26, and then running it parallel with other facilities, correct, Mr. Evans? Is that how you explained that to me in my office? Is that going to work?

Ms. VERMA. Listen, we are committed to doing everything that we can.

Mr. LUTTRELL. No, no.

Ms. VERMA. I cannot—

Mr. LUTTRELL. Everybody says that that does not have a plan.

Ms. VERMA. Right. Well, I think we do have a plan. We talked about a number of optimization projects that need to get done. We are talking about how we implement in Michigan. We are going back and looking at lessons learned and how we can implement it in a way that supports end users with better training, with better support.

Mr. LUTTRELL. You are highly confident Michigan is going to fire up successfully.

Ms. VERMA. I am confident, yes.

Mr. LUTTRELL. Give me a statistic.

Ms. VERMA. I am not going to give you a specific number, but I feel pretty confident about it.

Mr. LUTTRELL. Better than 50?

Ms. VERMA. I think it is going to be better than where—I think we are going to be building on all the improvements that we have had over the, you know, with the optimization work and some of the lessons learned in terms of training. We are also putting in a lot of time and effort to figure out how can we figure out how to optimize and how to make these go in a more smooth way.

We are also building on a lot of the experience that we have had, a lot of the challenges that we face. We have actually learned from those, and so we feel comfortable going forward and that this is going to be better.

I will say this, if we just look back, right, in the recent, if we just look at Chicago, that has gone well, right? That is the only implementation that was done by Oracle. That has gone well. If we look at these recent code block releases, this is not the only one that we

have done. We have actually done several. We did one in August. We did one last year. We have seen that those have gone smoothly. If those had not gone smoothly, I can understand that there would be some concern.

If we look at in the last year, Chicago has gone well. All of the last two to three code block releases that we have gone have gone fairly seamlessly. Yes, there is little bumps and things like that that we have been able to get through, and they have gone largely successfully.

If we look at the recent past and the turnaround in terms of Oracle coming in, stabilizing the system, a lot of the problems that we have had have been addressed. The stability has been addressed. We have been able to do a good go-live. We have also been able to upgrade the system in several different areas successfully. Those areas, that is why I feel confident that our next go-lives will go well and that we are capable of accelerating.

Mr. LUTTRELL. Thank you. Mr. Chairman, I yield back.

Mr. BARRETT. Thank you, sir. I will recognize myself again. Coming to Michigan, 2026, we have level 1A complex facilities, right? Ann Arbor and Detroit, correct? Have any of these been rolled out in complex facilities up until now?

Dr. EVANS. I can start with that. The James A. Lovell Federal Health Care Center in North Chicago is a level-1 facility.

Mr. BARRETT. Okay.

Dr. EVANS. The short answer to that question is yes. I think I will further answer your question that I am very, very impressed with the leadership teams at all four sites in Michigan. I have met personally with each of them as we are getting things kicked off. In part in answer to Mr. Luttrell's questions, one of the levels of confidence that I feel in Michigan is this is as much about IT implementation, whether the software works as it is the personal and human sort of all of the staff at Michigan adopting, getting used to, working through the change of adopting this new system. I am very proud of the work that the teams in Michigan are doing to prepare. I think that should also sort of raise our level of confidence and success there.

Mr. BARRETT. Okay. Doctor Evans, what are some of the incomplete big rock projects that you described in your remarks earlier?

Dr. EVANS. Right. One of those is—an example of one of those is what we call position standardization. The way the Oracle health record, or what we call the Federal EHR works is the user, depending on what type of user they are has a different experience in the software, so whether they are a social worker, primary care provider, rheumatologist, an endocrinologist, which type of physician, nurse, et cetera, there are more than 300 different roles configured into the system.

We have learned at our sites that there were probably too many roles that were chosen by VA when we started down this path, and have been consolidating and standardizing what can be done in those roles. We just completed standardizing the roles for advanced practice registered nurses, geriatric and extended care providers and social workers, and took what had been 28 roles, that is 28 different training programs, 28 different sets of software capabilities to maintain, and compressed them down to six.

We are now starting with the nursing roles, Registered Nurses (RNs) and Licensed Practical Nurses (LPNs), there are more than 50 nursing roles, and we anticipate compressing them down quite a bit. Again, as we reduce complexity, it will improve the sort of the efficiency of training and the user experience as well. That is an example of one that is very, very important that we are tracking toward making very significant progress toward prior to the Michigan go-live.

Mr. BARRETT. Okay. Are there any remaining big rocks that are show-stoppers that if they are not done, it will inhibit the ability to roll this out at the next phase in Michigan?

Dr. EVANS. No. I would not say that they are show stoppers.

Mr. BARRETT. Okay. Do you feel, right now, I guess I can ask Ms. Verma this, is the system ready to go live today in Michigan if we wanted to? Like, do you have confidence that we could do this right now if we chose to? That is for you, Ms. Verma.

Ms. VERMA. I am sorry, I thought you said Dr. Evans. I would say a couple things, right? If we look at the system that we have today, we are making changes. We are doing optimizations. I think that this year we should continue to do that work around optimizations and so that when we do implement with Michigan next year, which is what we are slated to do, that that will go well. It should go better than the initial five, because we will have identified what those optimizations are and what those need to be, and so if we implement those now, that that will make Michigan go better next year.

Mr. BARRETT. Going back to when the initial rollout happened, the number of facilities we have rolled out, north Chicago, the whole thing and the pause, all of that, today you do not have confidence that the system would be ready to go in its current state?

Ms. VERMA. I think that we can implement a system today anywhere. However, there are some opportunities to improve the experience, and I think we have agreed with the VA to do that work and do the optimizations, do that before we go to another deployment. That the system in and of itself, yes, that can be deployed anywhere.

I mean, the reality is our EHR is being deployed all over the world. The DOD is using it. From a technology standpoint, yes, we can implement it. I think the VA and we agree that there is some optimization work that would make that deployment go in a much smoother better way and that it is worth making those investments today.

Mr. BARRETT. Okay. I am out of time on my question.

Ranking Member, go ahead.

Ms. BUDZINSKI. Thank you, Mr. Chairman.

I wanted to zoom out again to the accelerated deployment that we had talked about, that plan, and I wanted to specifically get OIG and GAO's, if Mr. Case and Ms. Harris could kind of—could you also share with us your thought about the accelerated deployment idea by 2028 or 2029.

Mr. CASE. Yes. To comment on whether it is feasible or will it work, we need to see the schedule. We need to see the master schedule. How do we get from where we are now to where it is that they want to be, whether it is in Michigan or some accelerated

schedule. Show us the steps each way. How long is it going to take? What are the risks that it will not work? What is the critical path? How do you modify this if something does not work or is not timely, and how much it will cost? To really assess the viability of any acceleration, show us. Show us the schedule. Show us the details, and then everyone in Congress, VA itself, OIG, GAO can evaluate it and evaluate the risks. I think that is really, from our perspective, one of the issues.

One thing we have not talked about much here is, so far, is our first recommendation of our first report was for VA to assess what the impact was on productivity at sites, and how to address that when it happens. Some loss of productivity is expected, but how much, what is the rigorous analysis of the loss of productivity, not just what happened at Lovell, but we have got to be honest with ourselves. We are going forward at four sites, including two complex sites, and how long will that be and what are the efforts. We have not seen that analysis yet, so we could close the recommendation.

Ms. BUDZINSKI. Could I just, before we go to Ms. Harris, the loss of productivity, could something like improving our training get to addressing some of those concerns?

Mr. CASE. That should be able to do it, ma'am, and we did a report on the training at the early sites. It was insufficient, and since then, my understanding is it has been improved, but we have a new system. We have heard that again. It is a different system now, and whether the new training that is going to be done will be effective in the new system, that remains to be seen, especially going forward at four sites.

Ms. BUDZINSKI. Could I just ask you, Dr. Evans, because I know we have talked about the schedule. Obviously Mr. Case just emphasized that as well, but the importance of it, that sounds like something the VA is committed to maybe—not maybe, but to definitely putting together.

Dr. EVANS. Yes, absolutely.

Ms. BUDZINSKI. Did I hear that right?

Dr. EVANS. Yes.

Ms. BUDZINSKI. Okay. That is good. Can I ask you the same question, Ms. Harris.

Ms. HARRIS. Absolutely, and before I respond to your initial question, I just wanted to add on with regard to the training, we have heard a lot from Ms. Verma regarding the training, but the training really needs to—the ownership of the training must reside at VA, and many of the pitfalls that they had with the initial five sites was they sort of relinquished that control to Cerner to do that training, when VA should be responsible for it, because the VA users are the ones that know the legacy system better than anyone else, and what it takes to be able to train up on the new system.

My understanding—we made a recommendation that VA must improve their change management strategies, no doubt. Training is a huge component of that. My understanding is they are still working on that, but that should be finalized and be very detailed before they go forward with the go-live. In addition, just with regard to the—are they prepared, I mean, they have got—if they deploy in 2026 to Michigan, I mean, that is a huge if for all the reasons that

Mr. Case has stated, but you still have 2 years remaining on that contract with 160 sites, it is impossible. The answer is, no, they are not going to be able to deploy to all of the sites within the remaining time of the contract.

To get to Michigan, at least as Mr. Case said, we need that integrated schedule, and if they do deploy, Mr. Evans did mention—Dr. Evans mentioned something very important about DOD, which is, you know, they did the IV&V after that initial wave of—so it was multiple sites that they deployed to before they did the IV&V.

It could be a very good test, I think, if they were to deploy to Michigan to have that IV&V done at those four sites. Again, an independent look, not VA, not Oracle Cerner to do that, that review, so that we can identify in full—end to end, what those issues are.

Ms. BUDZINSKI. Just to go back to that point, because I know we have talked about it a bit, but to just hear from Oracle and the VA on the IV&V test, like, if there is some added value to a third party helping us take a review, look under the hood, I feel like I have heard there is not necessarily opposition to that. That could be maybe helpful. That is a question, I guess.

Ms. VERMA. What I would say is there is a cost to that, so that should be part of the calculus here. The second thing I would say is if that we look at the more recent implementations in these code blocks, the testing that we have done has worked well, right? We have actually made changes to the testing program. We have given them different environments to help their internal process of testing, and it has actually gone well.

It could be that an IV&V maybe a few years back would have been helpful, but I think we are in a different place now and the testing program that we have has worked well if we just look at the recent past with the last two or three code block releases. I think they have gone better, and I think if you are going to go forward with IV&V, to think about the additional cost of that as well.

Ms. BUDZINSKI. Okay. Great. I yield back. Thank you.

Mr. BARRETT. Thank you.

Mr. LUTTRELL. Thank you, sir.

Mr. Evans, what is the—I do not know the best way to say this, but standard of success for Oracle and what they need to meet in order to say, Hey, look, this—Michigan is good, we are moving—which one is the next site? I mean, because we went into the pause because the standards were not met. Are they required to meet the standards that currently exist, or have we increased those standards of success?

Dr. EVANS. I think I mentioned earlier that we have worked on some metrics that we are following, and actually, frankly, with Oracle Health we follow a lot or many more metrics than are actually on the dashboard of the nine core metrics that we followed during the reset, and that we will continue to follow as we move forward.

We have defined the thresholds for success for each of those with the exception of one that we are finalizing now after we did a burn-down of trouble tickets and are resetting what the normals should be.

You may see that in a GAO recommendation that we need to set our targets and thresholds. We have set eight of the nine. The

ninth will be set momentarily. That will be a measure of how we measure success, but there are many others. Really to me, what is——

Mr. LUTTRELL. Oracle needs to meet those nine standards——

Dr. EVANS. Right.

Mr. LUTTRELL [continuing]. before we consider Michigan a success and then we flex to the next facility?

Dr. EVANS. Right. I think those standards are—I mean, these are—some of the metrics are operational metrics, right? It is how we measure quality of care at our facilities. It is access to care for veterans. It is wait times.

Mr. LUTTRELL. All right. Let me break this down a little bit further. My question is, at what point in 2026 when Oracle activates Michigan, there is going to be those checks in the box. Now, if they get three out of the nine, are they good to go and that is considered a success, or do they have to have all nine? Which I would say obviously you need all nine, but I am asking you.

Dr. EVANS. I mean, my preference is that we are meeting our goals across the board. Now having said that, I would say it is—we are deploying the Federal EHR in Michigan, right? This is a partnership that VA and Oracle Health are going to need to do this together to success—and frankly, with the local leadership in Michigan, and so we—the success here is a shared project. I would say that is number one. Number two, yes, I would like us to see us meeting our goals across all the metrics.

Mr. LUTTRELL. If—I am still trying to dig an answer out of you guys. My concern is that we kick the can down the road. We activate in Michigan and we only have a certain amount of successes out of those nine like, Hey, that is good enough, we are just going to go further and Michigan fails. Then here we are all over again and we have to go into another pause and projections well past \$50 billion. Because of where we are currently, there has to be a line-by-line check that says, We are absolutely solid, Michigan is good to go, 100 percent, and now we are moving on.

In my opinion, that is exactly where we are considering how many dollar bills are going to this project. I do not know if you can answer that question or not, Mr. Evans. Unless you want to——

Dr. EVANS. In short, I can say yes. System has got to be stable. It is got to work for end users. It has got to work for the operations of our medical centers, period. How we measure that is something that I meet with the committee staff on a monthly basis and we go through those metrics and we will continue to review those as we lead up to Michigan, and frankly, we are going to use those.

Mr. LUTTRELL. When you move out of Michigan, is there an end date for Michigan where we activate here, we have got 2 months and then we are going?

Dr. EVANS. We go live at Michigan, and then typically, we are looking to see operations restored at the medical center in the three-to four-month timeframe after a go-live.

Mr. LUTTRELL. Three to four months in Michigan alone.

Dr. EVANS. I think—I mean, I think one of the things here, as we talked about earlier, right? If we wait, we have a challenge in front of us, right? We—the longer VA operates as a healthcare system with two different electronic health records, the more risk that

we are taking on. We have to balance the need to move forward toward a single electronic health record to support an integrated national healthcare system in VA. If we are going to move forward with the Federal EHR, which is our plan, commitment, and desire, then we cannot just wait for Michigan to be over and spend another year deciding whether we were successful or not.

we are going to have to measure together as we move forward our success month to month. It is one of the reasons why I meet with this committee every single month. It is because we need to be assessing our progress at that frequency. Because if we do not start to do work at sites beyond Michigan, we will get to the end of Michigan and we are going to have another 18 months to wait for the next go-live.

Mr. LUTTRELL. What if Michigan—I am sorry, Mr. Chairman, I am over. You know where I was going with that.

Mr. BARRETT. I will come back to you in a moment. Okay.

Ms. Harris, I want to go back to your earlier point. Assuming we roll out in Michigan in 2026, that would give us how many sites have been—have had the new electronic health record implemented at that point?

Ms. HARRIS. 10 sites.

Mr. BARRETT. 10 sites. How many would remain?

Ms. HARRIS. 160.

Mr. BARRETT. 160. It is your opinion and your testimony that it would be impossible to implement the remaining 160 by May 2028. Is that correct?

Ms. HARRIS. That is correct, based on the previous track record and also, based on the fact that all of these sites have—are very bespoke. They are customized, and so, the change management associated with each of these individual sites, I do not think you can standardize that.

I think some might take longer than others, and it is just very hard to predict, but collectively, within a 2-year time period, considering it took them basically 6 years, 6 to 7 years to implement a 10 and you are talking 160, when you compare, to me, there is no way they are going to get that all done.

Mr. BARRETT. Right. Okay.

Ms. Verma, obviously the next question for you is, are we going to be through with the next 160 sites by May 2028?

Ms. VERMA. I think there is a lot of variables here, right? There is a technology piece. There is a training piece. There is a people piece of this. There is also internal processes at the VA. You know—

Mr. BARRETT. I think a simple no would probably be the easiest answer.

Ms. VERMA. We have been working with the VA around acceleration and how to do that, and there are multiple things that need to be addressed in order for us to move faster and to move quicker, and I think we are working toward that.

Mr. BARRETT. Yes or no, is it your position that this can be implemented by May 2028?

Ms. VERMA. From a technology perspective, yes, but there are other pieces of this that have to come along with the technology.

Mr. BARRETT. We live in the real world that we live in. We do not live in the just hit send on the computer and it works.

Ms. VERMA. Right.

Mr. BARRETT. Understanding the real-world conditions that we are in, understanding we do not have a schedule, to Mr. Case's point, Dr. Evans, do you feel that there are any possibility we can be implemented in the remaining sites by May 2028?

Dr. EVANS. No.

Mr. BARRETT. Okay. Mr. Case, do you?

Mr. CASE. I do not see how it could happen. I would like to see what the plan is if they were going to do it.

Mr. BARRETT. Okay. Ms. Verma, do you feel that this is even possible? I mean, can we even pretend anymore?

Ms. VERMA. Like I said, we are responsible for the technology standpoint, and we have said to VA from a technology standpoint that may be possible, but there are other pieces that go along, and we will acknowledge, right? That the VA, whether it is standardization, whether it is integrations, there is a lot of things that would need to happen to be able to meet that timeline. We are committed to doing that.

However, that there is also other pieces of it and we would need to work with VA on that, and we are having discussions about that, about what the timeline should be and what the schedule should be, and what are the things that need to happen to be able to accelerate.

Mr. BARRETT. Okay. I think even with acceleration, it is impossible to expect that we can be anywhere close to that by May 2028.

Now, Dr. Evans, to follow up on Mr. Luttrell's point, assuming we are in Michigan for several months, I think he was getting to the point of what if it is not good? What if it is not working? What if the checklist is not adequate? What if we are stuck in the position we were in the initial rollout? What if these are not going as well as we would like? What happens then? Do we go into another stand-down freeze? Do we keep accelerating as Ms. Verma has suggested? What do we do then?

Dr. EVANS. It is an excellent question. I would say this. I do not—I think we have to succeed, and I think we should be looking—

Mr. BARRETT. I would have said that 7 years ago too. I mean, we had to succeed then and we did not, leading us to where we are now. I agree with you, we have to, but we have to acknowledge the track record that led us to where we are now for the reality in which we are facing.

Dr. EVANS. Right. I understand that. I still believe that we need to succeed and we need to be working toward Michigan, with the understanding that that is what we must do. Your question is a question of well, what would we do if we did not succeed. I think we would be having very hard discussions right here in this room, most likely, but where I am working with our team, and frankly, where we are working at VA across the agency is to say this is something we must do, and I will tell you this.

In Michigan, they are enthusiastic. The sites are enthusiastic in Michigan. One of the things that I think you are well aware of in Michigan is that the sites in Michigan work in a very inter-

dependent fashion. Specialty care for veterans who are receiving care in the Battle Creek or Saginaw system often is delivered through Detroit or Ann Arbor. Lab services are shared across the VISN. The idea of—the opportunity to move from four separate instances of an electronic health record supporting four separate VA medical centers that are trying to operate more and more like one, they look at the opportunity here to have a single electronic health record for all four sites to support their sharing and care for veterans in the Michigan market as a huge opportunity.

I think we should feel some level of confidence when the sites are saying this is something we want, that we are ready for.

Mr. BARRETT. All right. Thank you.

Ranking member Budzinski.

Ms. BUDZINSKI. I appreciate that. I wanted to actually shift gears a little bit to AI as something that Oracle had talked a little bit about in the written testimony. Can you explain, Ms. Verma, how AI is being used in this instance?

Ms. VERMA. A lot of the AI that we are going to be deploying will come in sort of the modernization. I will say from the outset with whatever AI that we do deploy is that providers and physicians are always in control, right? This is not AI doing things, but giving options and helping and supporting, but decision-making about clinical care and all workflows, there is a human in the loop. I would start out by saying that.

I think what we have done to improve the her sort of outside the VA but that can be applied and we are willing to provide to the VA. For example, we have brought something called our clinical AI agent, right? Which can—if the patient agrees and the doctor's on board with it, you can listen to the patient/doctor interaction and can generate a note. That is one of the first things that we have brought to the market.

The second thing that we are bringing is a brand new EHR to the market, and that has AI infused across all of it, so if you think about a physician coming in to seeing a patient, today and really any EHR, you have to do a lot of searching. Look at their labs. Look at all their previous diagnoses. Especially for a veteran where they have complex healthcare conditions, and they have multiple co-morbidities, that is actually quite complex. What AI can do is give them a summary of the patient. It can detail here is all the different things.

The other piece that AI can do is it can help actually provide guidance to the provider and say, okay, based on this veteran's health condition, here are the care gaps. That is actually—we are actually bringing that in today, but AI can also—the provider has questions, bring me this, or it has a specific question, it can actually ask the her that and that is actually given.

The other thing that we can do with AI is we can identify if there is research going on in the facility, and is this patient a candidate for the research that is going on in that facility as well? I would say that AI is also going to automate a lot of the manual work that we see going on with providers, especially in the area of our reimbursements and collections and that particular area. There is a lot of manual work that goes on with that today. Think about scheduling and administration.

That is where I think by applying some of this modern technology, there is also some efficiencies to be gained by the VA as well, and it allows the providers to spend time with the patient and not doing a lot of administrative work.

Ms. BUDZINSKI. Is this—I mean, that type of innovation, is that covered under the current contract, or will there be additional cost associated with that?

Ms. VERMA. There are some pieces, like our clinical AI agent, which are in scope. In terms of the new EHR that we have—that we are bringing to the market, we are committed to providing that to the VA at no additional cost, so even though our contract specifies Millennium, our leadership has agreed that we would like to provide that to the veterans, because we think that that is going to give the most optimal experience, and it will improve care and quality for veterans, and that is the most important thing, so we are committed to doing that.

Ms. BUDZINSKI. How does Oracle look at quality and safety as it relates to this issue of AI and veterans and patient care?

Ms. VERMA. Sure. Safety is a high priority. We have got many systems and processes in place to assure that. I think the most important thing is that when we are deploying AI in anything that we deploy, there is always a human in the loop, right?

This is supposed to be a tool. It is supposed to be an assistant. AI is not a decision-maker. Everything that we deploy, and even if we look at things like we are providing at the—let us say the provider asks a question, we will not only provide an answer to the question, but we will also identify the source of the data.

Let us say we are providing a summary of the patient's history. In the summary that we provide, we will actually detail exactly where the data came from, so it is not like the provider is getting guidance and we are getting a recommendation, whatever you want to call it. They know exactly where that came from. I think the most important thing that we are doing is that the human is always in the loop in these processes. That is how we are applying AI.

Ms. BUDZINSKI. Will the system require informed consent from the veteran before AI is used during their appointment?

Ms. VERMA. Yes, and that is completely up to the VA in terms of making sure that those consents and how they want to put those processes in place. I think the most obvious one today that we are already using is around our clinical AI agent that generates the notes, and in those situations the provider always asks the patient, are they comfortable with that.

Ms. BUDZINSKI. Okay. Just going back to something I would asked about earlier, not on AI, but related, Dr. Evans, when I was asking early on about some of the VA cuts and thinking about cost to staff, do you expect that the VA might have to take on additional contracts to supplement for where some of the staff might have been cut in order to make sure that we are properly going live in March?

Dr. EVANS. I think it is too early to tell that. We are still looking to make sure that we are optimizing how our current staff is deployed to meet the needs of the program.

Ms. BUDZINSKI. Okay. I yield back. Thanks.

Mr. BARRETT. Thank you. Mr. Luttrell.

Mr. LUTTRELL. Thank you, sir. Dr. Evans, is all of the veterans' healthcare data being moved into the Oracle cloud?

Dr. EVANS. Yes. Let me—so the—we have migrated data from the VistA systems and actually every day are migrating data from the VistA systems, our electronic health record, into what is called HDI, Health Data Intelligence, it is an Oracle product that will be hosted in the Oracle cloud.

That data then supports—is migrated into the Oracle electronic health records support care delivery so that when the provider logs in—one of the challenges when you move to a new electronic health record is if you have to start over and find all the information and repopulate the new record with the information, it is a significant burden on providers and staff, nurses and the like, to do that population of the electronic health record.

VA made a significant investment in partnership with Oracle Health to migrate a significant amount of data from our existing electronic health record, VistA, into the Federal EHR, which should help ease the transition.

Mr. LUTTRELL. Which Oracle controls in their cloud?

Dr. EVANS. It is VA's data.

Mr. LUTTRELL. Hopefully. God willing, that stays the same.

Does anyone—Ms. Verma, is the data that has moved from the VA into the Oracle cloud, is it standalone and no one else can touch it?

Ms. VERMA. Correct. It is a standalone. All the data rights and everything specify that that is controlled by the VA. It is actually shared between the VA and the DOD.

Mr. LUTTRELL. Okay. Other organizations that work with Oracle and work with Oracle cloud system, they cannot access that data at all?

Ms. VERMA. Correct. They do not have access to it.

Mr. LUTTRELL. It is completely standalone.

Ms. VERMA. Completely standalone.

Mr. LUTTRELL. Okay. Thank you.

I yield back.

Mr. BARRETT. Thank you.

Dr. Evans, you said it takes sites, on average, several months, 3, 4 months maybe, to basically fully recover, if you will, and get back to full-steam operations after implementing this. Do you feel that the sites that have already implemented this new electronic health record are fully recovered, fully functional, and fully operational right now?

Dr. EVANS. I think one thing I would clarify with that is that what we have learned, thus far, is that the recovery varies based on the specialty, based on where the care is being delivered. For example, urgent care and the Emergency Room (ER) recover their productivity almost near instantaneously, which is important, because we cannot have volumes decreasing in urgent care in the ER. Whereas in primary care, as an example, in part secondary to perhaps some of the configuration decisions with the electronic health record, in part secondary to the complexity of primary care having to deal with a patient's entire set of health issues, medication man-

agement, for example, productivity, recovery lags in primary care, so it is not exactly the same across the entire medical center.

Having said that, we are measuring productivity across the entire medical center at each of our facilities. We have seen a positive and appropriate trend at all facilities, and they are, for the most part, at their pre-go live levels of productivity, actually pre-pandemic, pre go-live levels of productivity.

Mr. BARRETT. Spokane and the other facilities are nearing pre go-live productivity marks across the spectrum?

Dr. EVANS. Yes. I do not have the exact numbers right here. That is on our dashboard. We share that regularly. It is north of 85 percent across all facilities. Some are above 100 percent. We can certainly share those numbers.

Mr. BARRETT. Okay. I know you said earlier that we must succeed in this, and I fully agree with you. We have not, though, given in the more recent discussion just now, given a lot of consideration for the cost, and the cost of this is an unknown at this point. I think yes, we have to—we have to make this work, but we also have to be mindful and knowledgeable about the cost that that is going to take. I think to the other observer standpoint, that is something that remains an unknown. I do not know if you can—

Dr. EVANS. Yes, I can agree, and as I mentioned earlier, we are committed to building out the integrated master schedule. The integrated master schedule is the foundation for building a life cycle cost estimate.

Mr. BARRETT. How long until we can expect to see that?

Dr. EVANS. I think, as I mentioned, our plan is to do that iteratively, so the first phase that you will see is the integrated master schedule for Michigan. What is happening at this very moment in Michigan is what we call the current state reviews that will inform the build of the integrated master schedule by April for the Michigan sites. Then we will begin to plot out the schedule beyond Michigan and build that integrated master schedule then to the end of the contract.

We are accelerating that effort. I cannot give you an exact date right now that we will be finished, but we understand how important that is to be able to build the life-cycle cost estimate. We are very aware of the importance of getting that information to you and frankly others that are at the end of the table here.

Mr. BARRETT. If we are years, plural, into this, and we still do not have the schedule and we are scheduling the schedule, how can we expect to get that in a reasonable—just to get our arms around it? I mean, our position here as members of this committee is to look at the effectiveness of this, the oversight of it, but also the cost of it, and are we delivering a good value for the people that sent us here to spend their money on their behalf, and we cannot even do that without an analysis of what that is going to look like.

Dr. EVANS. Yes. I mean, I know this—I do not want to make—I am making a promise in the sense that I can promise you that work is going on right now. I was just in meetings looking at the analysis of cost to date, our projections of what that cost looks like moving forward. We are actively working on the life-cycle cost estimate, and I look forward to keeping you up to date. We understand

that it is important for you to get that soon—sooner rather than later.

Mr. BARRETT. Okay. Thank you. I appreciate the—everyone here, to our witnesses for appearing today to discuss the future of the electronic health record modernization program. I understand committee members—sorry. Ranking Member Budzinski for your closing remarks.

Ms. BUDZINSKI. Thank you very much. I appreciate everyone's time and the panel's discussion and the thoughtful questions from my colleagues. I think one of the things that is very clear is that we all share a lot of really deep concerns about our next go-live date. I am encouraged to hear Dr. Evans talking about the integrated master schedule and working toward some real metrics that have been recommendations from the GAO and the OIG to address some of these concerns.

That being said, I think it is really important that we are not pressured into this accelerated—the VA, I should say, is not pressured into the accelerated timeline of 2028 by anyone, really just to avoid a potential contract extension, because this really is ultimately about veterans' healthcare and making sure that they are getting the health care that they deserve and it is being administered to them. I think we share collectively, I have a lot of concerns. I think we have some steps to address some of those, and I look forward to continuing this conversation. Thank you very much.

Thank you, Mr. Chairman.

Mr. BARRETT. Thank you. Thank you for keeping me well-behaved. Again, I want to thank our witnesses for appearing today. Thank you for the testimony that you provided. I know that many of you spent hours, plural, probably tens of hours, hundreds of hours developing and analyzing this. As I stated at the beginning, I am new to this committee and new to this Congress and new to this issue, but I am invested in making sure that we deliver the outcome that we all should expect.

I know you all understand when I say this is not just an IT system. It has a lot of individuals and their health that depend upon this. The productivity and the morale of the people doing the work as well as the outcomes for health for our veterans, it directly affects all of them.

The veterans that I represent in Michigan's Seventh congressional district are going to be among the first to find out if this system has fundamentally improved since the reset. The facilities in Battle Creek and Ann Arbor, specifically, are where the majority of veterans in my district go for their healthcare. It is why I am concerned by the talk of speeding up the pace of go lives considering the VA has only done one partially successful go live in the last 3 years with assistance, again, from the Department of Defense, and with the complexity coming with the facilities in Michigan, it gives me a great deal of concern for that.

It is far more important the VA does this right instead of fast. The plan is to continue fixing the system's problem while preparing to go live in Michigan, and that is something that we need to be very mindful of. The subcommittee expects VA and Oracle to show

that they can get this right before veterans and VA staff in Michigan have to figure it out for themselves.

Dr. Evans, I am encouraged by your remarks that the staff in Michigan are very excited about the opportunity that lies before them to integrate this together in the way that they have been interoperably intending to do in Michigan for some time now.

Thank you again for all of you for participating in today's hearing. I want to thank the members of the committee for your questions and remarks as well. I will ask unanimous consent that all members have 5 legislative days to revise and extend their remarks and include extraneous material. Without objection, so ordered. With that, this hearing is adjourned.

[Whereupon, at 4:47 p.m., the subcommittee was adjourned.]

A P P E N D I X

PREPARED STATEMENTS OF WITNESSES

Prepared Statement of Neil Evans

Good afternoon, Chairman Barrett, Ranking Member Budzinski, and distinguished Members of the Subcommittee. Thank you for the opportunity to testify today about the initiative of the Department of Veterans Affairs (VA) to modernize its electronic health record (EHR) system.

I want to begin by thanking Congress and this Committee for your shared commitment to Veterans and for your continued support of the VA Electronic Health Record Modernization (EHRM) efforts. This testimony comes at a pivotal moment. With new leadership at the VA, there is a renewed commitment to ensuring that every aspect of the EHR modernization efforts is reevaluated. Secretary Collins made it clear in his confirmation hearing that the status quo is not acceptable. Every previous decision, policy, and process must be thoroughly reviewed to ensure that it aligns with our core mission: providing Veterans with the highest quality care through a system that works for them, not against them. Specifically, we are going to take a hard look into previous EHR efforts. That process has begun. The VA is committed to successfully implementing a modernized, interoperable Federal EHR system across its enterprise. VA's implementation of the Federal EHR system will provide a single, accurate, lifetime health record for Veterans that includes their health records from the Department of Defense (DoD). The new Federal EHR will provide a framework for improved enterprise standardization of health care delivery, which will positively impact patient care quality and safety. The Federal EHR will support simpler integration of other modern health information technologies and infrastructure to provide a more coordinated experience for VA staff and clinicians as they care for Veterans. The modernized EHR will support improved interoperability with the rest of the American health care system.

VA's focus is keeping Veterans at the center of everything we do. Veterans deserve high-quality health care, which means health care that is timely, safe, Veteran-centric, evidence-based, and efficient. The EHR is, and will remain, a key enabler of VA's ability to deliver the comprehensive health care Veterans deserve. VA remains committed to delivering an EHR that will support these goals. In addition, the adoption of a single system used by VA and DoD will help simplify health care delivery for providers in both Departments, benefiting patients who receive care in both systems or who are transitioning from DoD to VA for care. It will improve opportunities for collaboration and joint operations between the health care systems.

VA paused deployments of the Federal EHR system after listening to feedback from Veterans and staff who said the new EHR was not meeting expectations. VA announced the EHRM Program Reset on April 21, 2023, with goals of (a) addressing the concerns of the sites where the system was live, (b) investing in foundational enterprise work necessary for long-term success, and (c) preparing for successful system deployment at the Captain James A. Lovell Federal Health Care Facility in North Chicago, Illinois (Lovell FHCC), the sole exception to deployment activities. A little less than a year later, on March 9, 2024, VA, DoD, and the Federal Electronic Health Record Modernization Office (FEHRM) realized one of those goals by successfully and jointly launching the Federal EHR system at Lovell FHCC and at its affiliated clinical health care sites.

Throughout the EHRM Program Reset period, VA took steps to understand the issues, updated our contracts to better hold Oracle Health accountable, made hundreds of improvements to the system, and instituted a simpler and more effective process to address concerns when they arise. It's important to review these lessons and ensure they are learned and implemented. The VA is committed to delivering an effective EHR that supports seamless care for Veterans and enables VA employees to efficiently document and access important health information. Specific program outcomes will include:

- **Ensuring Veterans Have Trust in the EHR system:** Veteran outpatient trust scores have increased at all Federal EHR system sites since the beginning

of the Reset period—reaching 93 percent at the Columbus VA Medical Center (VAMC) in Ohio, which is an 11.6 percent increase since Quarter 1 (Q1) of fiscal year (FY) 2023; 88 percent at the Walla Walla VAMC in Washington state, which is a 4 percent increase since Q1 FY 2023; 92 percent at the Mann-Grandstaff VAMC in Washington state, which is a 3.5 percent increase since Q1 FY 2023; 85 percent at the Roseburg VAMC in Oregon, which is a 5.2 percent increase since Q1 FY 2023; and 89 percent at White City VAMC in Oregon, which is a nearly 6.5 percent increase since Q1 FY 2023. In addition, Veteran trust at the North Chicago VAMC has increased to 90.8 percent from 90.2 percent since Federal EHR system deployment in Q2 FY 2024. These improvements are the result of direct surveys of Veterans and their experience with VA outpatient health care, and it is important to ensure that these numbers of trust continue to increase.

- **Dramatically decreasing outages, which disrupt patient care:** Since January 2024, there has been a significant decrease in outages for the Federal EHR system—with the system functioning 100 percent of the time for 10 of the last 16 months, and 99.8 percent of the time or better in the remaining months. As of January 11, 2025, it had been over 250 days since the Federal EHR system last experienced an outage.
- **Decreasing the number of interruptions for clinicians, therefore minimizing slowdowns for Veterans:** The average user now experiences near zero interruptions (freezes or delays, for example) per day.
- **Increasing clinician and staff satisfaction:** Clinician and staff satisfaction with the Federal EHR system has increased—including increases in agreement in employee surveys with the phrases “the EHR is available when I need it” and “this EHR enables me to deliver high-quality care.”
- **Launching the Federal EHR system successfully in Chicago:** During the Reset period, VA launched the Federal EHR system in North Chicago because it is a joint facility with DoD. The facility saw a rapid increase in productivity and use—outperforming previous rollouts.

In light of these improvements, on December 20, 2024, VA announced that it was beginning onsite planning efforts to deploy the Federal EHR system to four Michigan facilities in Ann Arbor, Battle Creek, Detroit, and Saginaw. Representatives from the EHRM Integration Office, Veterans Health Administration (VHA), and the Office of Information and Technology (OIT) compiled functional and technical metrics to determine the best sequence for restarting site deployments. These metrics served as data points to evaluate site readiness and were closely considered, along with input from VHA, Veterans Integrated Service Network (VISN), and VAMC leaders to determine selection and sequencing for these new deployments. The final order and dates of system go-live events at the sites will be determined by the findings of the current state reviews (CSR) that are being completed as part of ongoing pre-deployment activities. It takes more than a year to safely and effectively prepare for a go-live.

The new VA leadership is rigorously reviewing the current State of EHR and looking for ways to accelerate the previous timelines that were committed to and will share with Congress what next steps are decided.

Based on lessons learned from previous deployments, the preparations for going live will include new approaches to optimize adoption and engagement for future users of the Federal EHR system, such as the development of more “Learning Labs,” which proved successful with our go-live at the Lovell FHCC, to allow end users to practice their skills in a simulation environment prior to go-live. Other improved or new approaches include improving onsite engagement during and after go-live, offering informal sessions for sharing tips, streamlining computer-based training, and further enhancing the Refresh, Optimize, Adopt, and Reinforce (named ROAR) Initiative to support continuous improvement, even after go-live events have concluded.

VA leadership acknowledges there is still work ahead and is committed to ensuring that we continue to listen to employees who are using the Federal EHR system, that we use their feedback to make enhancements to improve the system, and that we are ready and have a solid foundation for upcoming deployments. The continuous improvement efforts we have been focusing on during the Reset will continue unabated while VA begins early stage deployment efforts in Michigan. For example, VA identified several areas for improvement that are important for long-term success, which required re-visiting decisions made early in the program. These projects are more significant than a simple fix and are being referred to as “big rocks”—due to our prioritization of these efforts and because of the complex scope of the tasks. Some of these projects include further improving training for new users; standard-

izing and consolidating user roles in the system; and delivering pharmacy capabilities to improve coordination between ordering clinicians and pharmacy professionals. Notably, an important part of the planned pharmacy improvements, known as “pharmacy 3b” is scheduled for release this month as part of a bi-annual software code update.

Another improvement that will increase efficiencies and prevent future delays is the development of the Federal EHR system baseline, a tool that provides information on more than 2,300 functional and technology components that make up the Federal EHR system and was established as part of an enterprise-wide effort to better standardize the delivery of health care in VA. Using the baseline to better conform to national VA standards in advance of go-live will help avoid staff frustration, deployment delays, and increased cost.

Ongoing improvements at existing sites and pre-deployment activities at future sites can occur at the same time. We can, and are, doing both at this time. VA is continuing to move forward with a modern, commercial EHR solution in close coordination with our Federal partners, including DoD and the FEHRM. This new Federal EHR system will ultimately improve Veterans’ health outcomes. Not only that, but the new Federal system will also house Veterans’ health care records in one place from the first day they put on their uniforms to the last day of their lives. It will empower Veterans to receive care that is more seamlessly coordinated across the enterprise. It will help providers more holistically understand injuries or illnesses that Veterans suffered years ago, so that they can provide those Veterans with the best possible care today. It has the potential to further streamline VA operations and most importantly, it will improve the Veteran experience.

Veterans are at the center of everything we do. Ultimately, our goal is to deliver an EHR system that earns the trust of Veterans, clinicians, and staff. This means a system that works efficiently, enhances care coordination, reduces administrative burden, and will improve health outcomes for Veterans. We are not simply continuing business as usual – we are committed to getting this right. The responsibility we carry is immense, and we will not rest until this system delivers what our Veterans and providers truly need. With the activities and improvements that are now underway, VA leaders are optimistic about the success of our Federal EHR system optimization efforts and the eventual full implementation of the system throughout VA.

With the partnership of this Subcommittee, we look forward to making the changes necessary to fulfill the vision over the course of the 119th Congress. Furthermore, I extend my gratitude for your commitment to serving Veterans with excellence. Together, we will build a system that honors their service and improves their care for generations to come.

This concludes our testimony. We look forward to responding to any questions that you may have.

Prepared Statement of Seema Verma

Introduction

Chairman Barrett, Ranking Member Budzinski, 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.

On Dec. 20, 2024, VA announced they were beginning the pre-planning activities for deployments of the EHRM program, and pre-deployment work has begun at four sites in Michigan: Ann Arbor, Battle Creek, Detroit, and Saginaw. Pre-deployment work begins with a Current State Review (CSR).¹

The CSR is followed by a period of approximately 12 months of site preparation, training, etc. before a go-live. Oracle is working with VA to compress this timeframe so that the time from starting CSRs and doing pre-deployment work to the day of go-live is shorter. Depending on how much we can compress this timeline, we antici-

¹A CSR is a thorough evaluation of a VA Medical Center’s (VAMC) current infrastructure, workflows, processes, and technologies that interact with the EHR system. This includes technical aspects such as hardware, network infrastructure, and existing software applications and integrations, as well as operational workflows like patient registration and clinical documentation. CSRs involve interviews and discussions with key stakeholders across various departments at the local site—administrative, clinical, and IT teams—to understand their VA service scope and specific needs related to the EHR system. Ultimately, with this information, Oracle provides actionable recommendations to address gaps and ensure smooth implementation of the EHR system. This could include updates to infrastructure, training plans for staff, or adjustments to clinical workflows.

pate the four sites in Michigan to go-live sometime in the first half of 2026, hopefully early 2026.

While we are excited to restart deployment work at these four sites, we have encouraged VA to accelerate deployment activities and expand the number of sites to deploy to so that we can more quickly get this program back on course. Beginning CSR work now for additional sites is critical so that, assuming the four deployments in Michigan go well, we have new sites ready to deploy to later in 2026 and a continuing pipeline of sites ready for deployments.

Acceleration

We are working very closely with VA to determine the best course of action for accelerating deployments and building a schedule that will enable this program to successfully deploy the new EHR across all of VA's healthcare system. Maintaining the current pace will take decades, which is not acceptable to anyone, and which is why we recommend the path of acceleration. For acceleration to succeed, there is work we need to do, and work VA needs to do. We are very encouraged from our initial meetings with Sec. Collins and VA, as we do this important planning.

Oracle recognizes there are high levels of skepticism for how a program that has only deployed to six VA Medical Centers (VAMC) in six years can rapidly scale up to complete 164 additional deployments in a timely manner. This skepticism is driven by a largely negative public narrative about EHRM that has not caught up to the current state of affairs.

We believe this is due to lack of understanding of the significant investments Oracle Health is making to accelerate and scale deployments as well as the technological updates made to the EHR system, and the significant improvement work done during the Reset. This testimony will explain those updates and improvements in detail.

Oracle Health is fully committed to this mission, and as part of our ongoing efforts, we have significantly enhanced and are overhauling our deployment methods and tools. Leveraging Oracle's deep expertise in engineering, automation, and scalable technologies, we are implementing a suite of innovations designed to accelerate deployment timelines, scale our efforts, and reduce resourcing dependencies. Key initiatives include:

1. **Streamlining Deployment Methodology:** We are adopting a national standard and a robust change management process that will then minimize deployment activities designed to accommodate site-specific customization requests. This approach ensures consistency, reduces complexity, and accelerates deployment by allowing us to replicate deployments across multiple sites with greater speed and precision.

2. **Automating Testing:** By investing in advanced testing automation tools, we reduce manual testing efforts, shorten the testing phase, and improve reliability. Automation ensures that each deployment is thoroughly tested in less time, enabling us to support a higher volume of simultaneous deployments without compromising quality.

3. **Automating User Onboarding:** Oracle is implementing sophisticated user onboarding automation processes that streamline user provisioning and access. By automating these critical tasks, we significantly reduce manual effort, minimize delays, and ensure faster user access to the EHR, allowing us to scale deployments with fewer resources.

4. **Web-Based Data Collection and Automating EHR Configuration:** We are introducing a web-based tool to collect site-specific data more efficiently. This tool allows us to gather the necessary information from VAMCs quickly and more efficiently. Once the data is collected, we can automate the process of configuring the EHR system to meet the needs of each site. With our web-based data collection tools and automation, we will speed up the overall deployment and reduce manual work.

5. **Automating Domain Refreshes:** We are automating the process of refreshing system domains. This means that when updates or changes need to be made to the system, we no longer require manual intervention, which can be time-consuming and disruptive. Automation helps keep the system up to date with less effort, minimizes downtime, and frees up our resources to focus on other tasks, allowing us to handle more deployments simultaneously.

6. **Leveraging Virtual Training:** Oracle is scaling training capabilities by investing in virtual training methods, including on-demand learning platforms and interactive virtual environments. This shift reduces our dependence on instructor-led sessions and enables us to provide training to larger cohorts of users, signifi-

cantly increasing the number of simultaneous deployments we can support while ensuring that all stakeholders receive timely and effective training.

7. Expanding Partner Ecosystem: To support the growing demands of our accelerated deployment schedule, Oracle is engaging additional strategic partners, including large enterprises, to supplement staffing. These partners bring in specialized expertise and scale, ensuring that we can maintain high levels of support and execution across multiple deployment streams without overloading our internal resources.

Through these strategic investments in automation, process streamlining, and resource scaling, Oracle is positioning itself to not only meet the demands of the current deployment schedule but to exceed expectations by delivering faster, more efficient, and scalable deployments across the entire VA network.

When the work of the Reset is combined with the successful deployment of the EHR to Lovell Federal Health Care Center (FHCC) last year, the completion of the entire Department of Defense (DoD) deployment, the delivery of pharmacy and other enhancements, and the technological improvements that we are bringing to the program to enable more efficient deployments, it is clear we are not in the same place in 2025 as we were in 2018 or 2019, and certainly not since Oracle acquired Cerner in June 2022.

Consider the following:

- 1) The Millennium EHR that will be deployed at new sites is not the same as was deployed at the first six sites. Oracle has made investments that have made the EHR more stable, and Oracle has made extensive updates, enhancements, and simplifications to the EHR.

- a. At the current live sites, all these updates have been incorporated into the EHR, and it is being used more productively than ever before.

- b. For example, during the Reset, more than 3,000 functional changes have been completed for the EHR.

- 2) Significant improvements have been accomplished in testing, training and change management practices.

- 3) As part of our “Big Rocks” projects, we are implementing enhancements to address key areas for improvement identified by the six live facilities. These upgrades—focused on pharmacy, referrals, Quick Orders, and other aspects of the EHR—are designed to improve productivity, drive standardization, and enhance usability.

- 4) We have greatly enhanced the process and procedures used for patient safety.

- 5) VA, too, has made and is continuing to make significant strides in its standardization project, decision-making and change management.

Moreover, technology has advanced, allowing Oracle to bring further improvements to the EHR system.

- 1) Oracle is moving the EHR to the cloud, providing a base for highly scalable deployments, making future updates to the system much easier, and enhancing cybersecurity.

- 2) We are automating and scaling our deployment and testing processes, which will reduce the amount of time from a CSR to go-live.

- 3) Oracle is making significant investments in modernizing the EHR generally for all our customers. These updates are designed to improve usability, reduce user burden, and enhance tools that help providers increase the quality of care and improve patient outcomes.

- 4) Oracle is using the latest innovations in Artificial Intelligence (AI) and integrating them into the EHR. When this program started, nobody was talking about integrating AI into EHR’s. The great benefit to VA of utilizing a commercial provider is that they will be the recipient of this innovation, and more, as we continue to drive innovation in healthcare technology.

In this vein, as we drive toward a full deployment, we are working with VA to bring new innovations to the system in 2025 so that veterans can begin to see the benefits of the modernization even before their local VAMC has deployed the new EHR. We intend to work collaboratively with VA to explore the introduction of our Clinical AI Agent (CAA) to the current live facilities this year and by early next year to all VistA sites, as the CAA is EHR-agnostic. CAA is an AI-powered voice assistant that provides context-aware summaries of a patient’s history, including diagnoses, medications, lab results, and past encounters. It also provides ambient clin-

ical documentation – capturing and transcribing patient conversations in real-time, automatically generating structured clinical notes.

We have offered to speed VA's entry onto our Qualified Health Information Network (QHIN), which will enable every health system in the country to share patient data with VA. And we have offered to expand our Health Data Intelligence Platform (HDIP) from the current live sites to VistA sites. HDIP integrates data from various sources across the healthcare continuum, including the EHR, clinical systems, and third-party data providers, helping to close care gaps by proactively identifying missed interventions, enabling timely clinical actions, and supporting better health outcomes for veterans.

With these advances and new offerings, and the work of the Reset, the EHRM program is ready to accelerate deployments. We recognize of course there are still opportunities for improvement and work to do – by Oracle and VA – to optimize the system. This work can be done in parallel with deployments and should not prevent us from taking advantage of this current opportunity to move the program forward.

The remainder of this testimony continues in three sections:

- Then and Now: Accomplishments
- Opportunities Going Forward
- Innovation and Modernization for the EHRM Program

Then and Now: Accomplishments

Since Oracle's acquisition of Cerner in June 2022, we have made significant improvements to the technical performance of the system, worked with VA to standardize and simplify care workflows, which are supported by the EHR, enhanced training, worked with the current live sites to improve productivity and revenue collections, and sped delivery of system optimizations such as the critical pharmacy enhancements, among other important updates described below.

Technical and Performance Improvements:

At the time of Oracle's acquisition of Cerner in June 2022, the EHR system faced criticism for its performance. To this end, Oracle agreed to new Service Level Agreements with higher financial penalties. Immediately upon closing the acquisition and obtaining the keys to the Federal Enclave data center in Kansas City that runs VA, DoD and other federal users on the new Federal EHR, Oracle began applying our technical expertise, engineering rigor and stronger resources to stabilize and improve the system.

Our work has paid off and the EHR system is now reliably running and consistently available for use without severe outages, incidents or long pauses or crashes.

Part of ensuring a stable and performant system is strong testing processes and early engagement with the user community. We have instituted improved processes in this regard and are incorporating earlier user testing during the development process, as most recently demonstrated with Pharmacy 3b. This review process ensures that the correct levels of testing, including regression testing, are performed for each change.

Making the engineering changes such a high priority shortly after the acquisition brought stability, which then enabled VA and Oracle to focus on usability changes, simplifications and standardization.

Reset Accomplishments and Improving EHR Usability:

We are now nearly two years into the Reset, and while deployment activities are beginning for new sites, the work of the Reset will continue to prioritize optimization of the system for users. When VA and Cerner originally configured the system per direction from VA's National Councils, the effort at creating one system from 130 different instances of VistA led to overly complicated workflows and more "clicks" and time spent in the EHR than providers were used to under VistA.

During the Reset, Oracle and VA leadership visited the original five live sites to understand specific suggestions from end users to enhance the system. Oracle has made a total of 3,286 functional changes to the EHR, updated 154 workflows, and added 119 new workflows through Dec. 2024 based on feedback from users and a comprehensive review during the Reset. A change is defined as the addition of a new item that did not previously exist in the EHR or a modification to an existing item. In addition, many issues identified by users did not require a change to the EHR because they could be addressed with additional training, which is ongoing.

This improved training as well as the simplifications and updates made during the Reset are intended to improve the end user experience. For example, working

with VA we were given permission to make the following workflow changes from those originally decided by VA's National Councils in 2018 and 2019.

- **Acute Physician Track/Emergency:** Collaboration between appropriate VHA and DHA national groups and subject matter experts (SMEs) to converge on a list of stroke PowerPlans (including Telestroke) to increase efficiency and accuracy in caring for critically ill veterans.
- **Ambulatory Core:** Aligning search settings across all applications provides consistency in fields and supports the end users in selecting the correct patient, decreasing risk of error.
- **Oncology:** Multiple improvements to Oncology workflow, ensuring orders are activated on the correct encounter, documentation is easily accessible and visible to the care team, and facilitating communication efforts between team members to ensure veterans are scheduled and medications are available for veterans to receive the right care at the right time.
- **Case Management:** Clinical Documentation Improvement (CDI) mPage centralizes chart review to ensure clinical documentation is complete for charges to be made, easing the burden on end users and decreases time spent in navigating through various areas of the chart to find pertinent information.
- **Women's Health:** 16 PowerPlans were revamped to align existing content with current clinical guidelines aiding providers in providing consistent, up-to-date and evidence-based care for veterans. New content for women's health was implemented that includes risk assessments and standardized documentation for management and planning using American Society for Colposcopy and Cervical Pathology (ASCCP) guidelines. This data can now be viewed across the longitudinal record, improving the efficiency and care coordination for women veterans across the continuum.
- **Pharmacy:** Automated removal of discontinued or voided prescriptions from MMR eliminates the need for additional manual steps as pharmacists work through the e-Rx queue.

In June 2024 Oracle collaborated with VA during five planning sessions to define thirteen so-called "Big Rock" projects that will help improve the user experience. These projects were selected by VA and range from the Pharmacy 3b/3c work to improving PowerForms and Quick Orders to standardization work and creating a new, data-driven deployment schedule sequencing tool. Many of these projects will address VA's unique needs.

More than half of these projects are well in progress. Two have been completed, four will be completed by the end of May 2025 and four are currently in process.

We are enthused that the Big Rocks work plan will address issues of high user concern and make a significant difference in operations for the currently live sites as well as improve adoption at future sites. We believe this work can be done in parallel with efforts to deploy to new sites.

In addition, during the Reset and continuing to the present, VA has made changes as to its governance and standardization processes that are critical to optimizing the system quickly for VA users. By actively seeking and incorporating feedback from end users at live sites, VA has ensured that system improvements align with their needs. The commitment to ensuring end users have a voice has made sure that the optimization projects deliver meaningful benefits to both end users and veterans.

Revenue Collections:

Across all live Oracle sites revenue collections activity in Fiscal Year 2024 was uniquely challenged due to the Feb. 2024 Change Healthcare cyber-attack, which caused claims processing to be completely halted at all VA sites for most of the operating period. Oracle sites were down from February through October while re-enabling billing activity in VistA was prioritized. Before that, at the start of Calendar Year 2024, the five live sites had seen improved performance with collections to target reaching 100.3 percent of target from January to March 2024.

VA and Oracle worked together to aggressively manage existing backlogs to ensure the claims processing downtime didn't prevent collections metrics to dip significantly in FY24. The two CPACs where Oracle has live sites saw collections to target reach 100.1 percent (West CPAC) and 94.4 percent (North Central CPAC) respectively in FY24. That collaboration was further leveraged to facilitate expedited billing activity in Q1 of FY25 once claims processing was safely brought back up. Collections to target for the first 3 months of FY25 at Oracle-related CPACs were as follows: Oct: 70.8 percent (claims processing still partially down), Nov: 442.6 percent, Dec: 347 percent. Recently deployed optimization projects have allowed for im-

proved billing turnaround time, allowing for backlogs from FY24 to be managed effectively to drive the performance gains referenced earlier.

Productivity:

Productivity, in the context of healthcare, traditionally measures the volume of patient care delivered within a specific timeframe. It's a key indicator of how efficiently and effectively a healthcare system operates. When transitioning to a new EHR system, it's common for hospitals to experience a temporary dip in productivity. This is due to a variety of factors, including decreasing non-essential services to allow for the need for staff to learn new workflows, adapt to new technology, and adjust to changes in processes. The commercial market is driven by revenue and as a result clinicians are held accountable for ramping back up to full productivity within a set timeframe. Typically, it takes between three to six months for productivity to return to baseline levels after an EHR conversion.

During the initial rollouts, VA took longer to return to baseline levels compared to typical commercial clients or DoD. However, measuring patient loads and productivity under VistA and Millennium has been challenging. Productivity is measured by workload credit (or RVUs, which are the national standard for measuring productivity, budgeting, and expense allocation) in MCA Vera (fed by VistA). When VA originally configured the workflows for the new Federal EHR, VA did not include the necessary requirements to measure productivity in the same way that it was measured in VistA. Oracle has recommended that VA engage on a workload optimization project since 2022 to ensure this can be accurately addressed moving forward. As a result, VA and Oracle have initiated planning sessions to ensure they have the requirements in the system to ensure comparable measurements.

The duration of time it took VA facilities to attain pre-go-live productivity levels is longer than the industry average of 3 months. This attainment of pre-go-live facility level funding can be measured using Patient Weighted Work (PWW), which is a method used to adjust and measure the workload or complexity of patient care based on specific patient characteristics and needs.

Emergency Department (ED) measures are an area that, in many cases, are exceeding pre-implementation productivity levels due to the efficiencies the new EHR has provided ED staff, even with patient volume exceeding pre-implementation levels at all sites. Launch-point, a streamlined ED tracking board designed to enhance departmental workflows by offering real-time access to veterans' records and critical information, has significantly reduced Door-to-Doctor (D2D) and total length of stay (LOS) and providers' productivity has increased by 25–30 percent. The ED volume by site as of December 2024 compared to the baseline was:

- Mann-Grandstaff: Baseline of 1218 and 1,632 in December 2024
- Roseburg: 642 baseline, compared with 845 in December 2024
- Columbus: 1,014 baseline compared with 1,576 in December 2024
- Lovell FHCC: 1,499 baseline compared to 2,586 in December 2024

Addressing the following items, many of which are covered in the Big Rocks projects, will enhance the return to productivity following the implementation of the new EHR system:

1. Referral Management: The decreases in productivity are due to several factors including insufficient staffing levels and backlogs that preceded the go-lives. In addition, the referral process is not standardized across the program and leads to differing requirements from site to site and poor adoption of the standardized Oracle system.

2. Scheduling/National Baseline: Schedules are controlled during go-lives to allow additional time for end users to adopt the system. To return to baseline, the leadership must decide to increase the case load to pre-implementation levels once the facility has adjusted to the new EHR. There should be alignment at a national level of what measurements will be assessed for return to baseline and pre-go-live baseline must be measured in a consistent manner across facilities. Return to baseline targets and timelines should be communicated at a departmental level and sites should be held accountable at an individual level. Resources are available to provide additional support and training to users not meeting expected productivity levels.

3. Addressing Organizational Culture and Leadership Engagement: Site leadership engagement varies from site to site and the lack of strong leadership present and advocating for the program often reflects lower adoption and productivity. Sites have reduced schedules during go-live and no organizational directives are established for when departments are expected to increase patient visits. Oracle recommends enhancing training and support by increasing super user involvement—

highly trained individuals who act as subject matter experts (SMEs) and system champions—during go-lives. This approach ensures hands-on guidance and knowledge transfer, rather than relying solely on schedule reductions with no defined timeline for returning to full capacity.

4. User Adoption and Education: Sites must not go live unless recommended training percentiles are reached, and there needs to be sufficient support staff through go-live and into sustainment to ensure end users receive ongoing coaching.

5. Ensure Standard Operating Procedures: VA should ensure local policies are aligned with national policies prior to implementation. Examples of areas that have been historically impacted include Rapid Response, Patient Movement, and Staff Scheduling. Another example, Medication History and Reconciliation is a task that was not completed by nurses in the legacy system. In Oracle, the recommendation is for nurses to complete this task on or before the encounter so that providers can complete their assessments in a timely manner.

6. Optimize Solutions: Several solutions can be utilized to optimize the EHR for the unique needs of the VA. “Big Rock” projects are an example of how VA has continued optimization of national standards to gain efficiency and improve productivity in areas including Quick Orders, Message Center and Referral Management.

Interoperability:

A key component of the EHRM program is improving interoperability to ensure seamless care coordination across VA, DoD, and community care networks. EHRM’s interoperability advancements, such as the Joint Health Information Exchange (JHIE) and Seamless Exchange, enable automated, real-time data sharing, ensuring clinicians have immediate access to comprehensive patient histories and that service members have access to their complete records.

The JHIE is a secure network that shares health information. With the JHIE, all health providers—whether at a DoD Military Treatment Facility or from the TRICARE network—can securely access beneficiary records and health information electronically.

When the EHRM program was envisioned, the focus was making sure service members have a seamless record when transitioning to care at VA. The use of the same system at DoD (where they call it MHS Genesis) and VA (where they use the Cerner commercial name of Millennium) ensures that the record is seamless.

Of course, with VistA having 130 different instances across the VA healthcare system, interoperability just within VA is a challenge. EHRM eliminates this problem by using one standard EHR across the entire VA system, ensuring that no matter which VAMC a veteran uses across the country, the veteran’s record will be available – and the veteran should receive the same standard and quality of care.

Since the inception of the EHRM program, interoperability with commercial care providers for veterans has become critically important. The VA MISSION Act enables veterans to receive care in their communities if VA wait times are too long. When veterans go to the community for care, their medical record needs to go with them and come back to VA. The EHRM program ensures this is the case, as the Oracle EHR is interoperable with 90 percent of community care providers.

Seamless Exchange, the use of which is being expanded with Code Block 12, is a collection of record retrieval and reconciliation services that collects external health data, compares it to a patient’s chart, and reconciles it for provider review. This allows a provider to have complete and current data in their workflow for care decisions. Seamless Exchange will reduce the amount of reconciliation clinicians need to manually complete to do chart reviews. The addition of all Seamless Exchange capabilities will help the VA realize additional time savings in chart review.

Finally, Oracle is offering VA access to its future Qualified Health Information Network (QHIN) under the federal Trusted Exchange Framework and Common Agreement (TEFCA) at no additional cost, building on these successes to provide a secure and innovative approach to health data exchange and other potential data such as coverage and benefits information. This will allow every health system across the nation to share patient data with the VA, safely and securely.

User Satisfaction:

After each major code block update (twice a year in Feb. and Aug.), user satisfaction is measured. VA conducts these surveys, which are voluntary, and employees self-select into completing. Given that deployments have been halted since 2022 (other than Lovell FHCC), the user-base for surveys has not expanded beyond users at the initial five sites where dissatisfaction from initial missteps runs high. Despite these methodological limitations, the usability work and code updates that have been implemented have shown that clinician and staff satisfaction with the Federal

EHR has increased each year since 2022—including increases in agreement in employee surveys with the phrases “the EHR is available when I need it” and “this EHR enables me to deliver high-quality care.” Oracle strongly believes that providing our Clinical AI Agent and the many updates made during the Reset, as well as completing the pharmacy enhancements, will continue to allow for user satisfaction to improve.

Code Block 12 Upgrade:

On Feb. 21–23, 2025, the Code Block 12 upgrade will be implemented for the EHR system. The Code Block 12 upgrade includes significant improvements for the EHR system, including:

- **Pharmacy 3b/3c:** See below section on Pharmacy.
- **Seamless Exchange:** Oracle Health Seamless Exchange aggregates external health data from multiple sources—such as national and local exchanges—and deduplicates redundant information to create a cleansed, comprehensive patient history. Seamless Exchange has been piloted at the LaGrande clinic and is now being expanded to all ten Walla Walla connected sites.
- **HealthShare Referral Manager (HSRM) via OPENLink IntegrationPlatform (OIP):** Rearchitected the current Millennium to HSRM interface under a new cloud-based platform with key workflow, dataflow, and process improvements, eliminating the manual workflow steps and provide the clinicians with access to the data required to complete the Referral steps in an efficient manner.
- **Image Viewer – Radiology:** Image Viewer offers clinicians the ability to view Digital Imaging and Communications in Medicine (DICOM) images when configured with the Millennium Platform data base to provide referential viewing. Users can also access the web-based viewer when integrated with other application in CareAware Multimedia Study Management, to provide referential viewing from various workflows. This will be replacing SkyVue Distribution Viewer.
- **Financial Management Systems v8:** This is a General Ledger Accounting System, and the enhancement allows for First Party MCCF Refunds to be issued to Veterans from any Millennium site.
- **LifeImage v1:** “Gatekeeper” users can electronically receive and send DICOM image studies from Community Providers/Systems, eliminating the need to use CDs to receive or share images.
- **Managerial Cost Accounting v2:** MCA is responsible for ALL the cost accounting at FHCC for both DoD and VA. Oracle currently provides MCA with data extracts on the VA side to support workload capture, budgeting, various reporting requirements, congressional inquiries, etc. For FHCC, additional DoD extracts are needed to provide MCA with DoD data.
- **Medtronic PaceArt v1:** PaceArt is a workflow solution that compiles and manages patient’s cardiac device data. The system collects, stores, and retrieves data from programmers and remote monitoring systems from cardiac device manufacturers. PaceArt captures data from implant, in-clinic checks, and remote transmissions, patient’s data is generated and, it can be stored in the PaceArt data base to be sent to EHR.
- **Medtronic PillCam v1:** Medtronic PillCam gives the ability for clinicians to perform capsule endoscopy and with this integration, send results into Millennium.
- **Mental Health Suite (MHS) v2:** MHS is used for creating, editing, renewing patient intakes and treatment plans, and enabling care teams to collaborate to ensure provider compliance with regulatory guidelines. The MHS software was designed for psychiatrists, psychologists, social workers, and anyone involved in the creation of treatment plans for mental health patients.
- **Siemens Syngo v2:** The functionality will provide the ability for echocardiograms to be interpreted by a cardiologist at a second EHRM VAMC, after the Echo is ordered, performed, and documented at an initial EHRM VAMC site.

Pharmacy:

Overall, pharmacy operations in the six sites are stable. While we recognize pharmacy staffing has increased, we are hopeful that the new enhancements that have been provided in the recent Code Block release will enable VA pharmacists to operate more productively going-forward. The process in the new EHR for pharmacy is different than in VistA, but it also provides patient safety features that VistA does not have, which may take additional end user time but improves the standard of

care and safety for veterans. As an example, Medication Management Retail (MMR – the outpatient pharmacy application) displays the veteran’s lab values within the clinical workflow of the pharmacist allowing streamlined decision-making around medication dosing.

Seven million prescriptions have been filled using the new EHR at the first five live sites from the VA Consolidated Mail Outpatient Pharmacy since October 2020. This is in line with prescription fill volumes under Vista.

At the Lovell FHCC, pharmacy adoption is going well too. Barcode scanning (BCMA) for the month of Jan. 2025 at Lovell FHCC was 98.56 percent. This is better than the overall VA average of 97.7 percent and supports higher patient safety, such as the Opioid Advisor Tool. Dual beneficiary patients (those with both DoD and VA benefits) are all in one system now for pharmacy. All prescriptions are on one medication list regardless of whether VA or DoD is filling them. This provides patient safety and efficiency benefits. Finally, Lovell FHCC is continuing to use the conversion to the new Federal EHR to drive electronic prescribing. In the last 30 days, 99.8 percent of prescriptions have been authored electronically.

Reflecting back to the original deployment in Spokane, at that time VA and Cerner had not adequately accounted for the unique ways that VA operates its pharmacy. In choosing a commercial off-the-shelf EHR, there should have been a recognition that the commercial market (and even other government customers) does not operate their pharmacies the same way as VA and adjustments should have been made earlier.

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

However, after the Spokane and later deployments, 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 because in the VA healthcare system, VA is both the ordering party and the dispensing party.

By the time of Oracle’s acquisition of Cerner in June 2022, frustrations with the pharmacy module of the EHR were very high. In fact, it was the top concern we heard about in meeting after meeting, both with VA and with Members of Congress. By August 30, 2022, VA had put on Task Order the work necessary to customize the pharmacy module to fit VA’s unique needs. Seven key enhancements were contracted for, and there was a three-year timeline for delivery. Oracle delivered the first six and a half enhancements in a year and a half by Feb. 2024. The last enhancement, which is 3b/3c, took longer due to changing requirements from VA, but is still being delivered in Feb. 2025, earlier than three years.

The 3b enhancement going in Code Block 12 over Feb. 21–23, 2025, is an update that will enable VA pharmacists to modify a prescription and have those edits return to the provider-facing application in the EHR. Those edits will then flow through subsequent renewals of the particular prescription. This requirement is unique to VA, and the 3b/3c enhancement should enable pharmacists to work more productively. We will of course work with VA to monitor the impact of 3b/3c to see if any further action is necessary for pharmacy going-forward, but delivery and implementation of 3b/3c completes the seven enhancements that Oracle has provided to VA for the pharmacy module of the EHR.

Appendix A provides a summary of the first six enhancements and other pharmacy updates that have been made, as well as various safety features.

Training, Adoption and Support Services:

After our acquisition of Cerner in June 2022, it was made clear to us that the training conducted for Spokane, and even later deployments, was insufficient. Of course, with the deployment in Spokane, the training challenges were compounded by deploying during the pandemic and the associated stresses placed on healthcare providers at that time.

Oracle invested significant resources in improving the training program for new users as well as providing continued training for existing users on the overall system and updates to it. With better trained users, tickets and the need for support services generally decrease.

At the live sites, we have conducted various onsite education and optimization activities to help end users adopt existing workflows and identify and execute configuration and workflow improvement opportunities. In addition to observing how end users interact with the new EHR and resolving their high-priority issues, we

proactively identify end users with poor performance experiences and collaborate with VA to resolve these issues, including issues that are the responsibility of VA.

In the last six months we have held over 2,000 training classes for end users at the live sites. Specifically, we have conducted training for Oncology and Long-Acting Injections at VISN 20 sites to improve end user workflow adoption and experience. At White City and Mann-Grandstaff, we worked with VA to identify and implement optimization opportunities and educate users on workflows for Optometry. At Jonathan M. Wainwright and Columbus, we executed similar projects for Audiology.

Oracle also utilizes workflow data to identify end users needing additional training. Once identified, we send our staff onsite to partner with the end users, assisting them in streamlining their workflows, thereby reducing time spent in veteran charts and increasing the time available to spend with veterans.

For provisioning tickets to give end users access to the system or to specific roles, we have worked with VA to improve processes. In Jan. 2025, we successfully met the VA's target dates on 98 percent of the provisioning tickets logged. Performance improvements have been achieved with the transition to the Microsoft Edge platform, resulting in a 51 percent reduction in full-page load time for Community Care Coordination workflows.

Training for the deployment at the Lovell FHCC included new end user adoption activities (e.g., Departmental Workflow Readiness sessions and Learning Labs). These activities reinforced formal training and provided participants with an opportunity to practice their workflows through simulated scenarios in the VA Sandbox.

Learning Labs were created to bring together end users, with support from super users (who are highly experienced users), provider champions and informaticists to develop a comprehensive understanding of selected respective service line workflows as a cohesive care team. They were first piloted at Lovell FHCC in December 2023 for a small group of 54 super users. Post event survey data showed that more than ninety percent (92.1 percent) of respondents reported at least moderate improvement in their preparation for go-live, with nearly two thirds (65.8 percent) reporting great or exceptional improvement.

Based on the overwhelmingly positive feedback, the site and VA asked to partner with Oracle to expand the use of Learning Labs for end users prior to go-live. In close partnership with VA, we quickly stood up an additional 55 sessions for more than 200 end users. Because of the feedback from end users at Lovell FHCC, Learning Labs will be a key activity to help future sites prepare to adopt the new system.

More than 70 supplemental training materials were provided to end users prior to go-live to reinforce important training topics. In addition to the new end user adoption activities for Lovell FHCC, Oracle also made 36 early access computer-based training programs available to super users to support their work and provided supplementary surge training to dual hat users, pharmacists, and pharmacy technicians just before go-live. Weeklong sessions were conducted in November 2023 with the entire pharmacy operations staff, working through various situations and workflows. Also, knowledge transfer series led by pharmacists were held. Overall, Lovell FHCC pharmacy staff provided a 9.82 out of 10 rating for the workflow adoption training sessions they received.

Lovell FHCC:

The Lovell FHCC deployment is the first and only deployment that has taken place under Oracle's ownership of Cerner. The previous five sites that were deployed, were completed by Cerner. Oracle strongly believes that the work done since the acquisition to improve technical performance of the system, improve training, and work with VA to simplify and standardize workflows and make other improvements enables us to confirm, now that we are nearly one year after the March 2024 deployment, that it was successful.

The system at Lovell FHCC has been well-received by users, enabling them to provide excellent care to veterans, active-duty military, and their dependents. Compared to the original five live sites, improvements in change management, training, and communications led to notably higher adoption rates at Lovell FHCC. Oracle provided significant in-person, onsite support for users and worked with Lovell FHCC on specific areas where their workflows needed to be modified to adapt to the new standard provided in the EHR.

In many cases, productivity at Lovell FHCC has returned to patient volumes prior to the deployment. For example, providers are averaging less than 21 minutes in the EHR, and nurses just under 4 minutes per patient seen. In the Emergency Department, the pre-deployment baseline monthly average of patients seen was 1,499, and the current monthly average volume is far exceeding that at 2,856 patients. Similarly, the Surgery Department is operating at 110 percent of baseline under the new EHR.

The complexity of medical care at Lovell FHCC stems from its comprehensive range of integrated services, making it a strong predictor of success for larger VAMCs seeking to enhance care coordination. Lovell FHCC offers a full spectrum of services, including primary care, specialty care, behavioral health, surgical services, rehabilitation, and long-term care, mirroring the broad scope of care required at larger VAMCs. Key aspects that contribute to its complexity and scalability include:

- **Integrated Military and Veteran Care:** Lovell FHCC serves both active-duty military and veterans, requiring seamless coordination between DoD and VA systems, a challenge also present in large VAMCs with complex patient populations.
- **Multidisciplinary Specialty Services:** Offering cardiology, orthopedics, neurology, and mental health care in one facility allows for efficient referrals and comprehensive treatment planning, a model that can be scaled for larger VAMCs.
- **Advanced Surgical and Rehabilitation Services:** Lovell FHCC provides both inpatient and outpatient surgical services, along with post-operative rehabilitation, ensuring continuity of care, an essential feature for larger VA health systems.
- **Behavioral Health & Substance Use Treatment:** The integration of mental health services, PTSD treatment, and substance use programs aligns with the needs of high-risk veteran populations in large VA hospitals.

The success of these multifaceted services at Lovell FHCC demonstrates that with adequate resources, technology integration, and strong care coordination, similar models can be scaled to larger VAMCs to improve efficiency, patient outcomes, and overall healthcare delivery.

Patient Safety:

Patient safety is the top priority for Oracle and VA in the deployment of the new EHR. The EHRM program represents a transformation in veteran healthcare delivery, aimed at improving care coordination, reducing medical errors, and ensuring seamless interoperability between VA, DoD, and community partners.

However, we recognize that concerns have been raised regarding patient safety, from oversight bodies such as the Inspector General and the Government Accountability Office (GAO), as well as anecdotal claims of patient harm. Items such as the Unknown Queue² have left the misimpression that the Oracle EHR cannot be safely used at VA, even though it is safely used at DoD and at commercial facilities across the United States and worldwide.

In fact, the Oracle EHR is being used safely at VA too, and Oracle continues its ongoing work to strengthen safety efforts, demonstrating that the new EHR is not only safe but also continuously improving and ready for nationwide deployment. The deployment at Lovell FHCC was conducted with no patient safety incidents. In the time since Oracle's acquisition of Cerner in June 2022, there has been an 80 percent decrease in tickets reported as a safety concern by end users.

EHR safety is not a static goal—it requires continuous refinement based on real-world clinician feedback, safety audits, and system performance data. Oracle and VA have built a dedicated patient safety infrastructure to rapidly identify, investigate, and resolve potential issues. A key component of this approach is the Oracle Health VA Patient Safety Team, which serves as the subject matter expert body for patient safety. This team works closely with VA leadership, site-level clinical teams, and national safety organizations to proactively assess and mitigate risks.

Key safety initiatives include:

² Shortly after our acquisition of Cerner in June 2022, we were made aware by media reports and a leaked Inspector General report of a patient safety concern with the operation of the Unknown Queue (UQ). Despite its unfortunate name, the UQ was not a bug, it was a backstop to account for patient scheduling tasks to facilities or providers that were not recognized by the system or entered incorrectly by the provider. These scheduling tasks were not lost, rather they were routed for manual review and processing, but employees were not trained to monitor it.

By the time of this reporting on the UQ, the awareness and training issues had been addressed and minimal numbers of orders were entering the UQ. However, as the new owner we wanted to make certain that we brought our technical and engineering expertise to the issue to further reduce the chances of a provider entering an order incorrectly. On August 1, 2022, we delivered to VA updates that alert a provider when an order they entered could not be scheduled and requires correction as well as a similar message to the provider in their notification center. These alerts continue until the order is corrected by the provider. These updates were provided by us at no cost to VA. For the past two years, on average, only one scheduling task per site per day is routed to the UQ, and it is not an issue of any continuing concern.

- Real-time monitoring and response: A bi-directional data feed between VA's ServiceNow (SNOW) and Oracle Health's Remedy system ensures real-time tracking of patient safety tickets.
- National safety governance: A structured patient safety management model ensures stakeholder alignment across clinical, operational, and financial domains to measure and mitigate risks.
- Independent safety audits: As a demonstration of our commitment to patient safety, Oracle commissioned a 3rd party to conduct a risk assessment across high-impact clinical workflows (oncology, emergency medicine, and perioperative care), identifying 74 risk areas—39 of which required configuration updates, 16 code enhancements, and 19 governance policy changes.
- Patient Safety Checkpoints: Oracle developed a structured program that integrates the patient safety team into the Change Control process to provide additional support to the government as they adjudicate and approve the proposed changes. This initiative aims to proactively assess and mitigate risks associated with proposed changes in the system before they are acted on, ultimately ensuring the highest standards of patient safety for the new EHR. Risks are assessed by utilizing a library of curated patient safety controls, resulting in a detailed analysis of identified risks and recommendations for the selected change request.

The Oracle Health VA Patient Safety Team operates a Go-Live Patient Safety Command Center, which runs 24/7 during deployments to oversee and coordinate safety reporting and resolution in real time.

- During each deployment, a dedicated Patient Safety Manager is onsite, working alongside VA leadership and Oracle staff to oversee patient safety risks.
- National governance structures codified in VA Task Orders ensure increased coordination between Oracle, VA safety agencies (NCPS, IPS, VISN), and front-line clinical staff.

The new EHR has enhanced patient safety measures compared to VistA. Key improvements include the implementation of medication safety protocols and closed-loop medication documentation, which ensure accurate medication administration. The implementation of bedside barcode scanning has enhanced verification processes by allowing clinicians to confirm patient identities and medication accuracy at the point of care, thereby reducing the risk of errors. Furthermore, the full deployment of automated medication dispensing cabinets streamlines medication management, providing secure and efficient access to medications while minimizing the potential for dispensing mistakes. Together, these advancements create a safer environment for patient care and improve overall treatment outcomes.

While early implementation challenges were identified, the system has evolved and improved rapidly. These improvements, supported by measurable reductions in safety risks, enhanced governance, and accelerated issue resolution, demonstrate that the new EHR is not only safe but also positioned for successful national rollout.

Patient Behavioral Health Flags:

The new EHR contains Patient Behavioral Health Flags that assist in making providers aware of risks like suicide for veteran patients. In Feb. 2023, Patient Behavioral Health Flags were updated to be included in the Radiology and Lab components of the EHR. Flags were updated again in August 2023 to extend their visibility across all users, including schedulers using the registration function of the EHR. This addition ensured behavior health flags are visible both upon registration and between encounters to enhance coordination across a veteran's entire care team. In 2024 they were extended even further in the EHR to Pharmacy. Oracle Health continues to partner with the VA to evaluate opportunities to improve identification and management of Category 1 Patient Record Flags to enhance end user experience and veteran safety.

Opportunities Going Forward

Oracle is committed to continual quality improvement and there are opportunities for enhancement that we continue to partner with the VA to address, but we do not believe any of these challenges should stand in the way of proceeding with the four deployments in Michigan and further accelerating deployments. The EHR system is in a vastly different, improved place from the system of two to three years ago. Due to the amount of time it takes from beginning pre-deployment work to the actual go-live, we have the remainder of this year to continue improving the system while VA makes needed operational changes.

Cybersecurity and Moving to the Cloud:

We believe there is wide recognition for the need to better secure our veterans' healthcare data. The Government Accountability Office (GAO) has repeatedly flagged VistA's decentralized architecture as outdated and increasingly vulnerable to security threats. Transitioning to a modern, cloud-based EHR will strengthen data protection, system resilience, and overall cybersecurity posture, ensuring the integrity of veterans' health information in an evolving threat landscape.

Within the U.S. Government federal space, Oracle holds a number of DOD security accreditations and FedRAMP authorizations, and we are an approved vendor under the Intelligence Community's Commercial Cloud Enterprise (C2E) program and the DoD's Joint Warfighting Cloud Capability (JWCC) program.

Oracle Cloud Infrastructure (OCI) was built with its foundation in scalability and security, which is fully integrated with features such as bastions for zero trust access, security zones for compartmentalized workloads and integration of security across the Infrastructure, Data base and Application Layers.

Moving the Federal Enclave to OCI is underway. The first phase will be complete later this year, after which we will be able to start integrating new features into Millennium for VA. One feature we expect to integrate quickly is our Clinical AI Agent that reduces the need for providers to spend time in the EHR and enables greater patient engagement.

We anticipate the full migration of the EHR to the cloud to be complete next year. Oracle has committed to making this move to OCI at our expense.

Hosting the EHR on OCI will not only accelerate our ability to increase capacity as we scale the number of deployments, but also enable greater stability and reliability as the number of EHR users grows.

Big Rocks:

As mentioned above, Oracle made several recommendations to VA through the course of the Reset, including for how VA can: (1) institute stronger governance controls through clearer escalation paths for program decisions, such as those requiring cross-council consensus; (2) enhance change control processes through closed loop communications with end users and enforcement to standards; (3) standardize workflows and healthcare protocols, such as referral management, workload capture, and mammography; (4) improve system performance and operations; (5) optimize end user engagement and communications; and (6) advance workflow adoption and optimization.

Akin to our recommendations, VA stood up ten workstreams during the reset period and onboarded several "Big Rock" projects, which are specific initiatives aimed at improving the user experience, efficiency, and outcomes. VA's efforts toward standardization, establishing an effective configuration process, and creating playbooks to ensure alignment to model workflows will help VA create one standard of care across its healthcare enterprise and enable VA to provide quicker answers when deviations from the standard EHR are requested. Further, several of VA's "big rock" projects, such as position standardization (i.e., ensuring every healthcare worker with the same job title and responsibilities uses the EHR system in the same way), referral management, and ad hoc folders (i.e., organizing documentation that captures patient information in a standardized way), demonstrate a commitment to achieving standardization across the VA healthcare system.

Finishing the Big Rock projects is critical to the ability to accelerate deployments.

Oracle Recommendations for VA:

To accelerate deployments and set up the EHRM program for success, Oracle has made the following recommendations to VA:

1. **Adopt a National Standard:** Leverage known configurations that are working well at DoD and the six live facilities to implement a single, national EHR standard across all VA facilities. Standardizing workflows will not only ensure veterans receive consistent, high-quality care regardless of location but also reduce costs associated with bespoke configurations at each VAMC. Additionally, a national standard will streamline implementation efforts, improving deployment velocity and accelerating the modernization timeline.

2. **Advance Optimizations and Limit Third-Party Integrations:** VA should expedite execution of known optimization opportunities (e.g., workload credit, service connected / special authority compliance changes) alongside deployment activity to improve system usability. Further, VA should reduce reliance on third-party integrations to simplify workflows, decrease costs and limit cybersecurity exposures.

3. **Unlock Innovation and Scale by Migrating to the Cloud:** Transition from the on-premises systems to Oracle Cloud Infrastructure (OCI) to enhance cybersecurity and system resilience. This will allow for faster implementations and ability to adopt modern technology today and in the future.

a. Migration to the cloud is underway. With timely cooperation from VA and DoD for both infrastructure needs and necessary government approvals, migration of the Core EHR could be completed by 2026. This requires alignment to a predictable and streamlined cybersecurity review for SaaS and cloud-based technologies across VA and DOD to be quickly established.

4. **Adopt Modern Technologies.** Oracle Health is poised to deliver several new technologies to the VA in 2025, including our Qualified Health Information Network (QHIN), Clinical AI Agent (CAA), Health Data Intelligence (HDI) Companion App, and Patient Portal. As these solutions are EHR-agnostic, VA can deploy them across the enterprise now, even before completing the transition from Vista to the Federal EHR. This strategic approach will enable VA to immediately benefit from enhanced interoperability, advanced clinical decision support, and improved patient engagement—accelerating modernization efforts without waiting for the full EHR conversion. This will help all providers and patients benefit from new modern technology. We believe this will also help with adoption of the new EHR as providers working in facilities slated for a later deployment will start to understand how the new technology will assist them.

5. **Accelerate Federal EHR Deployments:** Based on the current plan and pace of deploying to four new facilities in VA's Fiscal Year 2026, full deployment would take over 40 years. Instead, VA should build on the success of the Lovell FHCC deployment and the optimization work done during Reset to accelerate the deployment plan. Current State Reviews (CSRs) should begin for additional sites so that after the Michigan deployments there is not a time lag before the next deployments can begin. In addition, VA should use a Veterans Integrated Service Networks (VISN)-based deployment approach to scale, optimize resource allocation, and ensure facilities within a network adopt a common standard simultaneously.

6. **Streamline VA Contracting:** To address specific needs or objectives with VA, task orders are awarded to Oracle Health under the VA EHRM IDIQ contract with defined scope, deliverables and timelines for a particular service or project(s) to be delivered. To streamline management and improve efficiency, VA should consolidate the approximately 35 active task orders. By merging overlapping tasks, centralizing oversight, and standardizing reporting, the program can reduce administrative burden and eliminate redundancies. Ultimately, this will lead to cost savings, increased accountability, and a more efficient path forward for the EHRM initiative.

Referrals:

One of the Big Rocks is Referral Management:

- As part of the Big Rocks project, Oracle implemented updates to the referral system including a new custom referral form, functionality to enable sites to send one referral for multiple diagnoses, added audit history and added functionality so all open and archived referrals are shown in one comprehensive view.
- These enhancements address VA's top requests and were provided at no cost to the VA, including features like internal closed-loop referrals.

Deployment Schedule:

The EHRM program has not had a proper deployment schedule since before the Reset. Oracle is encouraged that VA is working with us to prepare an integrated master schedule so that we all are working toward the same goals and timeline.

Innovation and Modernization for the EHRM Program

While VA purchased the Cerner EHR, Oracle has made significant investments in developing modern health care applications that are available in OCI. Oracle's strategic investments in our product offerings are closely tied to OCI. Many of our new products and product features that we have brought to market, beginning in 2024 and all the way through 2027, leverage OCI's capabilities. These advances help to address areas that have proven difficult in the VA adoption of the new EHR.

By migrating to OCI, VA can access these new state-of-the-art EHR features, healthcare-specific solutions, advanced analytics, and interoperability tools that are optimized for this cloud ecosystem. Importantly, the VA does not need to be fully migrated to OCI to start benefiting from these innovations—taking the initial step toward OCI unlocks access to these capabilities, including:

- Clinical Artificial Intelligence Agent (CAA) described above.
- Oracle EHR: Oracle is rolling out its new state-of-the-art, modernized EHR in an iterative fashion, starting with a fully featured Ambulatory EHR, with subsequent releases for specific specialties and inpatient care. This will be introduced to our commercial clients this year. The new EHR is designed to embed AI across the entire clinical workflow to automate processes, deliver insights at the point of care, and dramatically simplify appointment prep, documentation, and follow up for physicians and staff. With native integrations across a broad range of Oracle applications, the EHR is also designed to help streamline information exchange between payers and providers, support patient recruitment for clinical trials, simplify regulatory compliance, and optimize financial performance.
- Patient Administration System (PAS): PAS is focused on improving the efficiency and effectiveness of patient management tasks, including registration, scheduling, billing, and overall patient flow.
- Patient Portal: The Patient Portal is a digital platform designed to enhance patient engagement by providing individuals with secure, easy access to their complete longitudinal health record from their time in service, at the VA and in the community; and communication tools with their healthcare providers.
- Health Data Intelligence Platform (HDIP): The HDIP is a comprehensive solution designed to aggregate, analyze, and derive actionable insights from health data. This platform integrates data from various sources across the healthcare continuum, including the EHR, clinical systems, and third-party data providers. HDIP is currently available at the six live facilities and can be integrated with VistA, which would help VA close care gaps by proactively identifying missed interventions, enabling timely clinical actions, and supporting better health outcomes for veterans.
- Oracle's Qualified Health Information Network (QHIN) described above.

By utilizing a commercial off-the-shelf product, VA has access to the latest technology, Oracle Health is delivering tangible cost savings while ensuring VA has the tools needed for a more effective, efficient, and resilient healthcare system for veterans.

Closing

We believe that when the totality of updates, enhancements and innovations are considered, the EHR system must be viewed as a drastically improved system from the system that was originally deployed in Spokane in 2020.

Oracle is proud to continue working with VA to modernize its EHR system, and we are confident that the EHRM program is ready to deploy in Michigan and on an accelerated schedule for additional deployments.

We are steadfast in our mission to serve our nation's veterans through this project. Thank you and I look forward to answering your questions.

Appendix A – Pharmacy

Summary of the first six enhancements:

Enhancement 1: Toggle Prescription Synonym Visibility

- Implemented Feb. 2023
- This guides providers to order prescription/supplies based on what is formulary and fillable through the VA/Consolidated Mail Outpatient Pharmacy (CMOP). The intent is to reduce re-work efforts by Pharmacist/Provider to adjust prescriptions after the initial order entry.
- Shortened the amount of prescriptions a provider sees by almost 50 percent.

Enhancement 2: Optional Order Stop Date in Retail Med Manager

- Implemented Feb. 2023
- Keep ongoing medications for a patient on the active medication list so providers and pharmacists continue to have better visibility to the medications even when a new prescription is needed.
- Maintenance prescriptions will no longer change to a completed status once the legal date has been met. They must now be manually completed/ discontinued.

Enhancement 3a: Display Legal Rx Expiration Date in Orders

- Implemented Feb. 2023

- Prescription Legal Expiration date will now display face up to users in PowerChart. Prescriptions with 0 (zero) refills remaining and expiration dates that have passed will display in red text and will no longer be refillable regardless of refills remaining but may be considered for renewal.
- Visibility for providers when a prescription is no longer fillable (past legal expiration date), to help identify when a new prescription is needed.
- This enhancement will add the prescription Legal Expiration date to the Home Medications component and Orders profile to display within the home medications, the patient's medication list and Message Center.

Enhancement 4: Support mCDS Discontinue in Retail Med Manager

- Implemented Aug. 2023
- Reduce the step/clicks for pharmacy staff to discontinue duplicate prescriptions within the drug interaction checking alerts window.

Enhancement 5: Enable Orders Renewal Action on Retail Med Manager Prescriptions

- Implemented Feb. 2024
- This enhancement allows providers to easily renew and take other actions on outpatient pharmacy generated prescriptions for consistency with provider entered prescriptions.

Enhancement 6: Optional Pharmacist Verification for Pharmacy Technicians Refills

- Implemented Aug. 2023
- Increase Pharmacist efficiency (save Pharmacist time) by removing Pharmacist verification requirement.

Enhancement 7: Request Refills from Power Chart to Outpatient Pharmacy

- Implemented Feb. 2024
- This enhancement allows providers to perform a “right click” refill action in Power Chart and transmit a refill to the pharmacy for processing.

In the last two years, additional enhancements beyond these seven were made as follows:

Task Order 31: Three Drug Image

- This enhancement provides 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 helps 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.

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.

Also in Feb. 2023, an upgrade was included outside of the seven enhancements that quickened the search history for prescriptions in Medication Manager Retail (MMR). Pharmacists use this search history to research previously prescribed outpatient prescriptions and associated activity. This upgrade reduced the average time of 15.3 seconds for a search to 1 second, making it much easier for pharmacists to use.

Finally, all of the currently live sites benefit from pharmacy safety features inherent in the Oracle pharmacy module, known as Medication Manager Retail (MMR), that are not present in VistA:

- In MMR, pharmacists can view VA and community care prescriptions together, in a single provider view.
- Pharmacists can see relevant clinical information and lab values within the pharmacy application during prescription processing. This capability informs proper prescription dosing without leaving the order to go to another screen, unlike VistA.
- The new EHR allows for improved communication between VA pharmacists and Consolidated Mail Outpatient Pharmacy (CMOP) pharmacists checking prescriptions. VistA does not have this capability which can lead to prescriptions being sent back to the local VAMC for clarification. This feature has been used nearly 34,000 times in fiscal year 2025, which saves time in the fulfillment of prescriptions because it reduces the chances of the CMOP canceling a prescription back to the local VA facility.
- The new EHR allows VA pharmacists to communicate electronically with community care providers when requesting prescription renewals. This is another net new capability, and it has been used by VA pharmacists more than 9,200 times in fiscal year 2025. This represents 9,200 phone calls not made to community care providers by VA pharmacists. This enhances continuity of veteran care with prescription medications and encourages prescriptions staying inside of VA even when authored via community care.

Pharmacists and providers also benefit from the Opioid Advisor Tool in the new EHR, which includes enhanced decision support, including dose range checking alerts and the Opioid Advisor Tool. The Opioid Advisor Tool allows clinicians to simultaneously check data from 47 state Prescription Drug Monitoring Programs (PDMP) and DoD 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 guided more than 4,360 modifications to opioid prescriptions since October 2020. In these instances, the provider made a different and beneficial clinical decision based on the information the system provides. This information includes previous overdose attempts and any history of suicidal ideation. This is a net new capability that supports safer care of veterans.

Prepared Statement of David Case

Chairman Barrett, Ranking Member Budzinski, and Subcommittee members, thank you for the opportunity to discuss the independent oversight conducted by the Office of Inspector General (OIG) regarding the development and deployment of VA's new electronic health record (EHR) system. Since April 2020, the OIG has released 22 oversight reports on VA's rollout of the new EHR system that identified critical missteps and a lack of remediation for identified failings.¹ Of the 93 recommendations issued to date, 32 have not yet been fully implemented—with eight open for more than three years. Failure to satisfactorily complete the corrective actions associated with these recommendations can increase risks to patient safety and VA's ability to provide timely, high-caliber care at the new EHR sites. Fully addressing oversight recommendations could also help minimize considerable cost escalations and delays in the upcoming deployments.²

The OIG recognizes the enormity and complexity of the work being carried out by the Electronic Health Record Modernization Integration Office (EHRM IO) and other VA entities to deploy the new EHR system for the millions of veterans receiving VA care. In addition, OIG staff have been engaging with VA personnel for more than five years at the main EHR deployment sites in Washington, Oregon, Ohio, Illinois, as well as other support locations, and have observed their unwavering commitment to prioritizing the care of patients while mitigating implementation challenges.

The statement that follows emphasizes the need to not only implement recommendations but sustain change by fully addressing the underlying problems identified in OIG reports. While some of these reports reflect work from several years ago, they are still relevant given their unimplemented recommendations—reflecting deficiencies that have not been remedied during the nearly two-year-long reset

¹ OIG reports may be found on the website at All Reports, with those related to just the new health record system filtered to this list of EHR reports.

² While the OIG follows up with VA on open recommendations every 90 days, VA program officials can submit evidence of sustained progress or the completion of corrective actions at any time to facilitate closing recommendations.

pause and could affect future deployments. For example, an April 2020 report is highlighted to demonstrate that VA needs to do more work to ensure its facilities and leaders receive guidance and resources prior to going live to minimize impacts on VA provider and other personnel's productivity as well as veteran safety.³ The OIG remains concerned about the unimplemented recommendations from that April 2020 report related to ongoing development and deployment operations. Additionally, while some identified problems from OIG reports have been resolved by VA, there is the risk that similar or new issues could emerge as the system is deployed at much larger, more complex medical facilities. With four facilities in Michigan anticipated to receive the new EHR system next year, VA will still need to deploy it to over 100 other VA medical facilities with hundreds of thousands of users. As the recently concluded reset has led to new and updated system functionalities, leaders must be prepared to train and retrain staff on the system and swiftly manage any consequences from these updates that result in compromised patient care and safety.

Though far from exhaustive, this testimony highlights several OIG reports with unimplemented recommendations designed to enhance patient safety and the health care that veterans receive from providers using the new EHR. Remedying these issues, particularly in appointment scheduling and pharmacy operations, is foundational to ensuring that users accept the system and VA can deliver care safely and efficiently. It also stresses the need for VA to make certain that the system is stable and can handle future growth without the kind of outages and service degradations previously experienced. Finally, it spotlights long-term open recommendations regarding the lack of a master project schedule as well as undefined infrastructure and deployment costs.

THE OIG DETERMINED UNRESOLVED SCHEDULING PACKAGE PROBLEMS MAY NEGATIVELY AFFECT PATIENT EXPERIENCES AND FUTURE DEPLOYMENTS

For many veteran patients, their first and often most frequent experience at a medical facility involves appointment scheduling. Ensuring a smooth experience with appointment scheduling is a great way for VHA to build trust with veterans, and giving its staff effective, modern scheduling software can facilitate a more efficient workforce. For those reasons, in 2021 and 2022, the OIG reported on difficulties that employees experienced when using the patient appointment scheduling package at the Mann-Grandstaff VA Medical Center in Spokane, Washington, and the VA Central Ohio Healthcare System in Columbus.⁴ Among the findings were that VHA and EHRM-IO did not fully resolve known limitations in the scheduling system before and after deployment, leading to reduced effectiveness and increased risk of patient care delays. Schedulers were forced to develop work-arounds for unresolved issues and inaccurate data migrated from legacy systems. EHRM-IO leaders did not provide scheduling staff with adequate chances to identify limitations in the new scheduling system before implementation, nor did leaders develop an efficient and transparent method of handling requests for help and complaints (trouble tickets).

While these very specific problems have been remediated, similar problems could reemerge once VA begins large-scale deployments of the system at new facilities. In 2024, the OIG alerted VA to the potential that systemic, facility-level scheduling problems may be exacerbated at larger, more complex VHA medical facilities.⁵ Among the issues raised were the need for additional staffing and overtime, displaced appointment queue functionality (described below), challenges related to providers and schedulers sharing information, inaccurate patient information, difficulties changing appointment types, and the inability to automatically mail appointment reminder letters. Consequently, at future go-live facilities, assessing staffing levels and overtime usage before deployment and preparing staff with approved workflow best practices may help to reduce employee stress and facilitate successful adoption of the system.

³ VA OIG, *Review of Access to Care and Capabilities During VA's Transition to a New Electronic Health Record System at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, April 27, 2020. This report focused on the EHR's initial capabilities and the potential impact on patients' access to cares.

⁴ VA OIG, *Care Coordination Deficiencies after the New Electronic Health Record Go-Live at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, March 17, 2022; VA OIG, *New Patient Scheduling System Needs Improvement as VA Expands Its Implementation*, November 10, 2021.

⁵ VA OIG, *Scheduling Challenges Within the New Electronic Health Record May Affect Future Sites*, March 21, 2024.

The Displaced Appointment Queue's Issues Can Impede Rescheduling

According to a March 2024 OIG publication, schedulers using the new EHR are experiencing difficulties with what is termed “the displaced appointment queue,” which at times resulted in patients not getting rescheduled.⁶ That queue is used by scheduling staff to identify appointments needing to be rescheduled if a healthcare provider has a schedule change. Staff reported that the new EHR does not always route appointments to the queue and that properly routed appointments sometimes disappeared from the queue. EHRM-IO told the OIG it was aware of the defects in the operation of the displaced appointment queue and that updates in 2024 were intended to address them. EHRM-IO staff stated that medical facilities received guidance informing schedulers how to reschedule patients without using the queue and that the queue was intended as a safety net. However, the OIG reported that the defects in the operation of the displaced appointment queue made it an unreliable safety net. The OIG oversight team could not definitively identify how many patients were affected. However, because the problems were not resolved, they could be amplified at larger VHA facilities, given more staff will have more schedule changes requiring rescheduling.⁷

Some Previously Documented Scheduling Inefficiencies and Errors Persist in Changing Appointment Types and Sending Appointment Reminders

OIG field work revealed that schedulers still face ongoing difficulties in changing appointment types, and barriers remain in automatically mailing appointment reminder letters. These deficiencies may have been exacerbated by staffs' perception that training was inadequate.

Changing Appointment Types. The OIG's 2021 scheduling report found that VHA and EHRM-IO had not resolved many of the system and process weaknesses identified by pre-implementation assessments and workshops.⁸ One system weakness identified was the new EHR's inability to change the appointment type (face-to-face, VA Video Connect, or telehealth) for an existing appointment without canceling the appointment and reordering a new appointment.⁹ This process inevitably led to more burdensome work for schedulers and providers. In 2022, VHA planned on fixing this issue through a system update and was finalizing guidance for schedulers' mitigation strategies. However, in 2024, schedulers from all five new EHR facilities confirmed that they still need to cancel existing appointments and manually create new ones when changing the type of appointment. Using manual processes could have a much more significant impact at larger medical facilities.

Appointment Reminders. Another weakness the OIG previously identified in its November 2021 review was that the new EHR could not automatically send reminder letters to patients for upcoming appointments. While not required, veterans were accustomed to and relied on these letters from the legacy EHR. The letters also reduced “no shows” and missed appointments.¹⁰ The automated mailing of reminder letters is not a function within the new EHR, and during the OIG's March 2024 review, the team determined that this system limitation still existed. In November 2023, EHRM-IO had planned to release an interface that would allow schedulers to automatically generate the letters; however, the OIG understands the interface had not been deployed as of February 2025 at the Captain James A. Lovell Federal Health Care Center in North Chicago, Illinois, following that facility's March 2024 implementation of the new EHR.

As of March 2024, facilities that continued to mail appointment reminder letters had to manually print and mail them to patients, a time-consuming process for staff. One facility with the new EHR is estimated to have manually printed and mailed nearly 195,000 reminder letters for its appointments in fiscal year 2023.¹¹ The three facilities using the new EHR have undertaken different solutions to address this system limitation. Some now rely instead on other methods, such as

⁶VA OIG, *Scheduling Challenges Within the New Electronic Health Record May Affect Future Sites*.

⁷A separate issue affecting schedulers and care providers is that they cannot easily share information about appointments, such as notes explaining why an appointment was canceled, which was a function in the legacy EHR system.

⁸VA OIG, *New Patient Scheduling System Needs Improvement as VA Expands Its Implementation*.

⁹VA OIG, *Scheduling Challenges Within the New Electronic Health Record May Affect Future Sites*.

¹⁰VA OIG, *New Patient Scheduling System Needs Improvement as VA Expands Its Implementation*.

¹¹VA OIG, *Scheduling Challenges Within the New Electronic Health Record May Affect Future Sites*.

autogenerated text messages and emails or phone calls. VA should expedite the release of the interface to all medical facilities that are or will use the new EHR for those facilities wishing to continue mail reminders, whether alone or in addition to other options.

Training. The OIG team in March 2024 also identified issues with schedulers feeling that training provided by Oracle Health was inadequate.¹² Some schedulers at new EHR sites rely on their own local practices and guidance to supplement that given by Oracle Health, and VA has provided facilities feedback on the supplemental training. However, some of the facilities' locally developed work-arounds do not adhere to VA's approved scheduling workflow processes, which can contradict VA processes meant to standardize scheduling processes.

The New EHR's Scheduling Errors May Have Contributed to a Patient Death

The OIG confirmed in a March 2024 report that a system error in the new EHR resulted in staff's failure to complete the minimally required scheduling efforts following a patient's missed mental health appointment.¹³ While a letter was sent and calls were made on the day of the missed appointment, staff did not complete the telephone calls on separate days as directed. The OIG found that the patient's missed appointment, although updated in the new EHR to no-show status, was not routed to a "request queue." As a result, schedulers were not prompted by the system to conduct the mandated rescheduling efforts meant to maximize opportunities to engage patients and not let them slip through the cracks. The OIG concluded that the lack of follow-up contact may have contributed to the patient's disengagement from mental health treatment and, ultimately, the patient's substance use relapse and death.

On a larger scale, the OIG found that VHA was requiring mental health staff at new EHR sites to make fewer attempts to contact no-show patients than at legacy EHR sites. The standard operating procedure for minimum scheduling efforts establishes a different standard of care based on which EHR system is in use at a facility, which could result in disparities affecting veterans' access to care. Scheduling is a foundational element of any system that is designed to provide patients with timely access to quality care. Yet the recommendation to the then deputy secretary to monitor the new EHR's scheduling functionality, as well as the recommendation directed to the then under secretary for health to evaluate minimum scheduling effort requirements, are not yet fully implemented. In sum, the new EHR's operation does not comply with VHA's appointment scheduling policy.

THE NEW EHR HAS LONGSTANDING, UNRESOLVED PHARMACY-RELATED PATIENT SAFETY ISSUES

In May 2021, after VA's first deployment of the new EHR at the Mann-Grandstaff VA Medical Center, a pharmacy patient safety team under the VA National Center for Patient Safety (NCPS) identified pharmacy-related patient safety issues and staff concerns regarding the system's usability. For example, updates to a patient's active medication list were not routinely reflected at the patient's next appointment. The OIG found that, despite being aware of users' ongoing challenges in 2021, VA leaders elected to deploy the new EHR at four more VA medical centers.¹⁴ Following subsequent deployment of the new EHR in April 2022 (more than a year later) at the VA Central Ohio Healthcare System in Columbus, the OIG determined that patient safety and usability issues identified by NCPS were still a factor in many of Columbus's pharmacy-related patient safety incident reports.¹⁵ Although Oracle Health and VA have since resolved some of those issues, the OIG remains concerned, as described below, that the new EHR will continue to be deployed at larger, more complex medical facilities before resolving myriad known issues that remain related to prescribing medications and medication safety.¹⁶

¹² VA OIG, *Scheduling Challenges Within the New Electronic Health Record May Affect Future Sites*.

¹³ VA OIG, *Scheduling Error of the New Electronic Health Record and Inadequate Mental Health Care at the VA Central Ohio Healthcare System in Columbus Contributed to a Patient Death*, March 21, 2024.

¹⁴ VA OIG, *Electronic Health Record Modernization Caused Pharmacy-Related Patient Safety Issues Nationally and at the VA Central Ohio Healthcare System in Columbus*, March 21, 2024.

¹⁵ VA OIG, *Electronic Health Record Modernization Caused Pharmacy-Related Patient Safety Issues Nationally and at the VA Central Ohio Healthcare System in Columbus*.

¹⁶ Oracle acquired Cerner in June 2022, changing the name of the entity to Oracle Cerner and again to Oracle Health. The statement uses Oracle Health for readability, while some events occurred under prior business names.

Software Coding Errors Created Patient Safety Issues

EHR information is communicated between VHA facilities through different channels, including the Joint Longitudinal Viewer (JLV) and the Health Data Repository (HDR).¹⁷ For patients who receive care at a legacy-EHR medical facility, the JLV application allows healthcare providers to access a “read only” version of a patient’s medical record from both the legacy EHR, Veterans Health Information Systems and Technology Architecture (VistA), and the new EHR.¹⁸ The HDR is a data base that stores patients’ clinical information, including medications and allergies, creating a common repository of information from both VistA and the new EHR.¹⁹ Every medication used in VHA is assigned a distinct number, a VA Unique Identifier (VUID). The accuracy and completeness of VUIDs and medication allergy information contained in these systems is critical to supporting individual patient treatment decisions.

A 2024 OIG report affirmed that an error in Oracle Health’s software coding resulted in the widespread transmission of incorrect VUIDs from new EHR sites to legacy EHR sites.²⁰ The OIG learned these unique identifiers became inaccurate during their transmission to the HDR when fills for certain prescriptions were processed through the VHA’s Consolidated Mail Outpatient Pharmacy (referred to as the mail order pharmacy).²¹ In short, this error, now rectified, created the potential for medication-related patient safety issues for patients from any new EHR site who also received care at a legacy EHR site.

Medication-Related Data Transmission Issues Pose Threats to Patient Safety

The OIG learned that research into the cause of the VUID error led to the discovery of other problems associated with the transmission of medication and allergy information from the new EHR to the HDR. On June 15, 2023, the NCPS alerted VHA staff to data transmission issues and errors, including missing, duplicate, or incorrect medication and allergy information being transmitted. The consequences of inaccurate medication information transmission to the HDR include

- patients’ medications that have been discontinued or stopped by new EHR-site providers appear in the legacy EHR as active and current prescriptions;
- allergy warning messages not appearing when intended or inappropriately appearing for the wrong medication;
- duplicate medication order checks not appearing when intended or inappropriately appearing for the wrong drug; and
- patients’ active medication lists having incomplete or inaccurate information, such as missing prescriptions, duplicate prescriptions, or incorrect medication order statuses.

VHA staff were told to remain aware that legacy EHR sites may have inaccurate medication information for patients treated at both legacy and new EHR sites. An EHRM-IO data leader told the OIG that EHRM-IO and Oracle Health’s original testing focused on data transmission from the new EHR to the HDR, but no entity verified the data’s accuracy when accessed by legacy EHR users. Within the June

¹⁷ JLV is a read-only web-based application for viewing patient electronic health records from VA and community partners through a customizable interface. JLV plays an important role in VA’s transition to the new EHR, as it allows users to see EHR data at other sites regardless of the system in place. Because veterans are eligible to receive health care at any VA facility, providers at all facilities need accurate medication information. When a patient is prescribed a medication at a new EHR site, that medication’s unique identifier is sent to the HDR. If that same patient seeks care from a facility provider using the old system, and this provider enters a medication order, a system software interface from the old system accesses the medication’s VA Unique Identifier from the HDR data base to perform a safety check. This process, which relies on the accuracy of the information in the HDR, verifies the medication being prescribed is safe and compatible with any medications and allergies previously documented in the patient’s record.

¹⁸ The OIG uses the term “legacy EHR” to refer to Veterans Health Information Systems and Technology Architecture (VistA), the system used prior to the Oracle Health EHR product.

¹⁹ *Va.gov, VistA Monograph*, July 18, 2023. The VA Health Data Repository (HDR) is “a national, clinical data storehouse that supports integrated, computable and/or viewable access to the patient’s longitudinal health record.”

²⁰ VA OIG, *Electronic Health Record Modernization Caused Pharmacy-Related Patient Safety Issues Nationally and at the VA Central Ohio Healthcare System in Columbus*.

²¹ The Consolidated Mail Outpatient Pharmacy is a centralized automated pharmacy system comprised of seven pharmacies that provide mail order medications to VHA patients. The OIG did not find any errors on the part of mail order pharmacy staff or operations, and patients received their correct medications.

15 NCPS patient safety alert, a series of mitigations were described to be employed by frontline clinical staff at all legacy EHR sites and required that all legacy EHR site leaders have medical providers perform these multistep manual medication safety checks when prescribing new drugs for all patients who had received care at a new EHR site at any time. These manual safety checks are complex, time-consuming, and rely on the vigilance of patients, pharmacists, and frontline staff.

Further, at the time of the June 15 notice, VHA could not determine which patients were at risk of a patient safety event from the data transmission errors, and therefore determined that all patients who had been prescribed any medications at a new EHR site or had medication allergies documented at a new EHR site were “at risk.” Per VHA data, as of September 2023, approximately 190,000 patients had a medication prescribed and 126,000 patients had an allergy documented at a new EHR site. Approximately 68,000 patients were in both groups, totaling about 250,000 unique patients.²² In response to an OIG recommendation, VHA has notified all patients affected by inaccurate medication data transmitted to the HDR and informed them of the potential risk of harm due to possible inaccuracies of their medication and allergy information within the new EHR. However, patients have been advised to bring their medications to each VHA visit so their providers have an accurate inventory of current medications.

Despite these efforts, the OIG remains concerned that patients served by a new EHR site who also receive care at a legacy EHR site may still be prescribed contraindicated medications and that healthcare providers at legacy sites are making clinical decisions based on inaccurate data. For example, during the review of the HDR issues described above, the OIG learned of a new EHR site patient with posttraumatic stress disorder and traumatic brain injury with adrenal insufficiency whose care was negatively influenced by inaccurate medication data transfer from their new EHR site to the HDR, contributing to the patient not being prescribed a critical lifesaving therapy on admission to a residential rehabilitation treatment program at a legacy EHR site.²³ The legacy EHR site pharmacist’s data from the prescribing new EHR site did not include the patient’s most recent prednisone prescription. The patient realized they needed prednisone after they began exhibiting unusual behaviors, but the nurse said there was no prednisone on the patient’s medication list. Eventually, the patient was transferred to a local emergency room for care and prednisone treatment was re-initiated. This example shows the difficulty with completing numerous, accurate manual reconciliations, particularly for patients with impaired cognition.

The OIG continues to review VHA’s efforts to comply with the recommendation that they ensure legacy-site-EHR providers are aware of mitigations needed for patients previously treated at a new EHR site, as well as their efforts to monitor compliance with those mitigations.

The New EHR’s Negative Effect on VHA Pharmacy Staff

The OIG determined that Columbus’s chief of pharmacy prepared for challenges during the system transition, such as the pharmacy staff’s increased workload due to the new EHR’s operational inefficiencies. One mitigation was to hire nine full-time clinical pharmacists, which represented a 62 percent staffing increase, in order to reduce the backlog and maintain timely prescription processing needs following the April 2022 deployment.²⁴

A VHA leader stated that challenges with the new EHR’s usability also led to the creation of dozens of national and facility-level work-arounds and educational materials for pharmacy personnel. Facility pharmacy leaders also developed approximately 25 educational materials, such as tip sheets, reference guides, and job aids, to further support Columbus pharmacy staff. The OIG is concerned that the continued use of numerous work-arounds and educational materials is overwhelming for pharmacy staff to implement and may give rise to inconsistent practices, which increase risks to patient safety. In addition, the new EHR’s usability issues contributed to staff stress about making errors that could result in patient harm—concerns linked to pharmacy staff burnout, low morale, and decreased job satisfaction. The OIG found that following implementation of the new EHR, burnout symptoms for

²² VA OIG, *Electronic Health Record Modernization Caused Pharmacy-Related Patient Safety Issues Nationally and at the VA Central Ohio Healthcare System in Columbus*. The data represent the most recent update received by OIG from VHA of the number of unique patients who have had any medication prescribed or any allergy documented at a new EHR through September 29, 2023.

²³ VA OIG, *Electronic Health Record Modernization Caused Pharmacy-Related Patient Safety Issues Nationally and at the VA Central Ohio Healthcare System in Columbus*.

²⁴ VA OIG, *Electronic Health Record Modernization Caused Pharmacy-Related Patient Safety Issues Nationally and at the VA Central Ohio Healthcare System in Columbus*.

pharmacy staff increased and the Best Places to Work score for pharmacy staff decreased from the previous fiscal year.²⁵ VHA pharmacy and patient safety leaders told the OIG of a need for increased staff vigilance to avoid patient harm. OIG oversight personnel believe this increased vigilance is unsustainable by pharmacists and staff responsible for clinical decision-making and may lead to increases in burnout and medication-related patient safety events.

The OIG's recommendations from this March 2024 report to ensure pharmacist staffing levels are addressed and to evaluate and remediate the various technical and functional issues resulting from all these work-arounds remain open as of February 20, 2025.

MAJOR PERFORMANCE INCIDENTS MAY HINDER USER ADOPTION AND TIMELY, COST-EFFICIENT FUTURE DEPLOYMENTS

While the above reports describe the impacts of failings with the system's programming and functions, the OIG is also concerned that the contract between VA and Oracle Health and VA procedures do not have sufficient controls to prevent, respond to, and mitigate the impact of major performance incidents affecting the new EHR.²⁶ Since 2020, the system experienced hundreds of major performance incidents affecting the medical facilities where the system was initially deployed. VA lacked adequate controls to prevent system changes from causing major incidents, to respond to those incidents uniformly and thoroughly, or to mitigate their impact by providing standard procedures for outages and interoperable downtime equipment. Further, although major performance incidents can delay care to veterans, VA had no formal process to link reports of these delays to these incidents. Ultimately, the weak controls for handling major incidents stemmed from the original May 2018 contract.

In May 2023, VA modified the contract with Oracle Health to strengthen some requirements for addressing major incidents, but more work is needed. These new requirements include a metric that outlines monthly target percentages for the system to be free of incidents other than outages, an increase in the target monthly uptime for the system, and strengthened requirements for financial credits when problems have not resolved within established time frames. Reliable system performance and preventing incidents from happening were some of VA's primary reset goals.

The OIG made nine recommendations, including for real-time data-sharing related to potential problems in system operations, prioritizing major performance incident response in a clear and consistent manner, developing and enforcing response and other performance metrics to hold the contractor accountable, requiring sufficient detail in post-resolution reports, raising staff awareness of procedures, acquiring appropriate backup systems for downtime, and better identifying and addressing major performance incidents linked to negative patient outcomes. The nine recommendations are currently open, and the OIG has begun the follow-up process to assess VA's progress in implementation.

Although the OIG recognizes VA's improving system reliability, there are still incidents occurring every month. Separate from these requirements, in August 2023, VA contracted with Oracle Health to obtain a downtime viewer to provide an additional tool for clinicians when the system is unavailable. Still, VA has opportunities to make future contract changes that could help improve its management of major incidents. Oracle Health could share real-time EHR incident data to provide VA with greater awareness and enable quicker oversight action. Detailed incident reporting would also help VA determine root causes and prevent similar incidents from occurring. This is particularly important as the new EHR system may be stressed by deployment in larger and more complex medical facilities. Indeed, the planned 2026 deployments in Michigan will include, for the first time, simultaneous deployments to complexity level 1 facilities.²⁷

INCOMPLETE INFRASTRUCTURE ASSESSMENTS AND COST ESTIMATES CANNOT BE REMEDIED WITHOUT A RELIABLE, HIGH-QUALITY PROJECT SCHEDULE

²⁵ The OIG compared 2021 and 2022 facility All Employee Survey (AES) results. A Columbus leader informed the OIG that VA launched the 2022 AES on June 6, 2022, 37 days after the new EHR's implementation at the facility. "Best Places to Work" is a summary measure produced by the Partnership for Public Service and is a weighted average of job and organization satisfaction and likelihood to recommend VA as a good place to work.

²⁶ VA OIG, *VA Needs to Strengthen Controls to Address Electronic Health Record System Major Performance Incidents*, September 23, 2024.

²⁷ VA, Diffusion Marketplace, accessed February 18, 2025.

The OIG's oversight, which began before the system's initial deployment at the Mann-Grandstaff VA Medical Center, focused on the condition of VA's physical and information technology (IT) infrastructure before system deployment. Two 2021 reports (published in May and July) resulted from audits that examined cost estimates for needed physical and IT-related infrastructure upgrades nationwide. For the new EHR system to operate as intended, VHA facilities need these infrastructure upgrades, but they are generally funded from different sources. Because the life-cycle cost estimates for infrastructure upgrades did not account for costs from all VA components' budgets, some estimated costs were not included in mandated reports to Congress from 2018 and 2020.²⁸ Transparent and reliable cost estimates are critical for Congress to make informed budgeting decisions. VA senior leaders also depend on these cost estimates to plan program budgets, approve acquisitions, and monitor program execution. The OIG determined that both the existing physical and IT infrastructures were inadequate for the new system at initial deployment sites. Pertinent life-cycle cost estimates for infrastructure upgrades were also unreliable and likely underreported by approximately \$5 billion. However, these cost estimates will not be reliable if VA does not develop and maintain an integrated master schedule projecting the detailed activities needed to bring the new EHR to its facilities.

VA Has Not Developed a Reliable Schedule Enabling Deployment Planning

The OIG's 2022 audit of the EHRM program's master schedule found VA lacked a reliable integrated master schedule consistent with their adopted scheduling standards, which increased the risk of missing milestones and delaying the delivery of the system.²⁹ At the time of publication, the OIG estimated that schedule delays could result in about \$1.95 billion in cost overruns per year and would undermine VA's other modernization efforts on supply chain and financial management systems. Given various inflationary pressures and the two-year pause on deployments, that figure may understate the impact of cost overruns.

To implement the program successfully within any proposed timeframe, it is imperative that VA develop a reliable integrated master schedule. GAO guidance, which the EHRM program office adopted in its internal plans, states that a high-quality, reliable schedule should be comprehensive, credible, well-constructed, and controlled.³⁰ This schedule is designed to cover the entire required scope of work needed to successfully complete the program from start to finish, including both government and contractor work. It is intended to provide VA personnel with a road map to completion, track progress, help identify potential problems and track their resolutions, and promote accountability for assigned tasks. Further, it will help determine more precisely the sum of financial resources Congress must provide for project completion.

Simply put, VA never completed a baseline schedule or an overall schedule that fully integrated individual portions of the project. The audit team found known tasks were not reflected on schedules and longer-term actions had not been scheduled. Given the approach VA was using in planning when the OIG completed this audit, VA would not have a high-quality, reliable integrated master schedule until it starts deploying the system to the very last facilities. While there may be precise scheduling items for a facility that are not set until closer to the actual deployment, there are many tasks and interdependencies that VA can plan for currently.

Moreover, VA could not have relied upon any scheduling effort it had conducted, since it did not engage in a risk analysis, which shows how events would impact the likelihood the schedule could be met. Given VA's announced intention to deploy the new EHR to larger facilities next year, it must have contingency plans given that VA has experienced numerous unexpected problems with the new EHR's functionality and sustained drops in productivity requiring ongoing, resource-intensive mitigations at new EHR sites.

Four of the OIG's six recommendations to EHRM-IO remain open. At the time of this hearing, VA has not yet complied with internal guidance by developing an integrated master schedule that meets standards and makes certain that activities from all relevant VA entities are included in the schedule. The department has also failed to implement procedures for performing schedule risk analyses and make contract language and program office plans (or other guidance) consistent to confirm the ap-

²⁸ VA OIG, *Deficiencies in Reporting Reliable Physical Infrastructure Cost Estimates for the Electronic Health Record Modernization Program*, May 25, 2021.

²⁹ VA OIG, *The Electronic Health Record Modernization Program Did Not Fully Meet the Standards for a High-Quality, Reliable Schedule*, April 25, 2022.

³⁰ GAO, *Schedule Assessment Guide*, GAO-16-89G, December 2015.

appropriate individual is responsible for developing and maintaining the integrated master schedule.

The two reports on physical and IT infrastructure recommended that VA obtain an independent cost estimate for the EHR program's life-cycle costs, which VA received from the Institute for Defense Analyses. In September 2022, the Institute reported a cycle cost estimate of \$49.8 billion, including \$32.7 billion for a 13-year implementation phase (including a three-year schedule adjustment reflecting the low likelihood the new EHR would be deployed system-wide on schedule), and the rest for sustainment.³¹ While the OIG has now closed those recommendations related to obtaining the estimate, VA's stakeholders should recognize that the Institute's cost estimates are not likely to still be reliable given the delays and system changes of the intervening years. Additionally, the Institute itself acknowledged that its estimate did not have a high degree of certainty given the many risks and uncertainties in the deployment schedule.

Deficiencies in Reporting Reliable Physical Infrastructure Cost Estimates for the EHRM Program

This audit examined whether VHA's cost estimates met VA standards and were comprehensive, well documented, accurate, and credible, and whether they were reported to Congress. Some VHA medical facilities may require significant physical infrastructure upgrades, such as electrical work, cabling, heating, ventilation, and cooling to successfully deploy the new EHR system.

VHA and the then Office of Electronic Health Record Management (OEHRM) shared responsibilities for estimating and reporting physical infrastructure upgrade costs.³² VHA developed the physical infrastructure upgrade cost estimates, while OEHRM was responsible for reporting all program life-cycle cost estimates to Congress in accordance with the Veterans Benefits and Transition Act of 2018.³³ It required quarterly reporting on the EHRM program's status, including annual and life-cycle cost estimates and defined the program as any activities to procure or implement the new EHR system. In early 2019, VA's Office of General Counsel determined that physical infrastructure upgrades must be funded from accounts specifically available for construction-type purposes, such as VHA's nonrecurring maintenance and minor construction funds. Given the pause of the program for the last two years and the lack of a more specific deployment schedule, VA has not yet produced evidence of sufficient progress to close the OIG recommendation that VA disclose accurate costs for physical infrastructure upgrades in program life-cycle cost estimates to Congress.

The EHRM Program Did Not Have Reliable IT Infrastructure Cost Estimates

In 2021, VA estimated the total program cost of \$16.1 billion would include \$4.3 billion in IT infrastructure upgrades.³⁴ Like the work on physical infrastructure, the related IT infrastructure audit examined whether OEHRM-developed cost estimates from 2018 and 2020 were well-documented, comprehensive, credible, and accurate, and whether OEHRM reported to Congress all IT infrastructure upgrade costs, including future technology updates. The audit team found VA did not include costs for critical program-related IT infrastructure upgrades in the estimates reported to Congress during that period, effectively underreporting program cost estimates by nearly \$2.5 billion for IT infrastructure upgrades that VA's Office of Information and Technology (OIT) and VHA were expected to fund.³⁵ Also like the physical infrastructure costs, OEHRM officials stated they felt the omitted costs were outside their scope of responsibility, but neither OIT nor VHA reported these costs to Congress, despite VA and Government Accountability Office (GAO) guidance requiring life-cycle cost estimates to include all costs, regardless of source. The costs should have been disclosed by OEHRM. VA did make changes to projected costs starting in the November 2021 report to Congress, but because VA was still developing the independent cost estimate, there was no certainty the updates were reliable. Without all critical IT infrastructure upgrade costs accurately presented, Congress lacks

³¹ GAO, *ELECTRONIC HEALTH RECORD MODERNIZATION: VA Needs to Address Change Management Challenges, User Satisfaction, and System Issues*, March 15, 2023.

³² In 2021, VA transitioned EHRM program management from the Office of Electronic Health Record Modernization (OEHRM) to the EHRM Integration Office (EHRM IO). EHRM IO has responsibility for all recommendations originally assigned to OEHRM.

³³ Public Law 115-407.

³⁴ VA OIG, *Unreliable Information Technology Infrastructure Cost Estimates for the Electronic Health Record Modernization Program*, July 7, 2021.

³⁵ OIT is expected to fund some upgrades for the local area network, end-user devices, phones, and Wi-Fi, while VHA is expected to fund upgrades mostly for medical devices.

the comprehensive picture of total program costs needed to make informed oversight and investment decisions. Subsequently, based on the OIG's audit, VA's reporting requirements were updated by the VA Electronic Health Record Transparency Act of 2021.³⁶ As of February 21, 2025, the recommendations ensuring that (1) cost estimates align with VA policy, (2) VA maintains full and complete cost accounting, and (3) complete and updated costs are conveyed transparently to Congress remain open because VA has not been able to identify all of the program's costs.

Facility and Staff Deployment Support Have Unidentified Costs and Risks That May Continue in Future Deployments

Each VA medical facility that has deployed the new EHR has experienced sustained drops in productivity and throughput.³⁷ According to VA, its facilities have used strategies like temporary staffing, increased use of community care, and finding efficiencies in operations.³⁸ The challenges associated with mitigating the productivity drops at facilities during the training periods and after deployment will be magnified at the larger, more complex deployments in 2026. In April 2020, before the first deployment, the OIG called on VA to evaluate the impact on productivity during a deployment and provide facility leaders with operational guidance and required resources.³⁹ The recommendation remains open, as VA has not yet made sufficient progress on this effort. The same is true of the OIG's recommendation that VA minimize the number of mitigation strategies that facility staff must employ to deal with decreased capabilities during the deployment. Increased hiring efforts, temporary staff, and community care utilization all have significant financial impacts that VHA facilities must navigate. As discussed previously, the number of additional pharmacy staff handling manual pharmacy operations at new EHR sites has increased VA's payroll. There is likely to be an even greater financial impact as VA may need to hire thousands of employees to mitigate the drops of productivity at future deployment sites. Without having finalized plans to deal with these issues, VA cannot reasonably estimate deployment costs in addition to physical and IT infrastructure needs.

Other OIG reports have discussed issues impacting user acceptance of the system from inadequate or insufficient training on the new EHR to concerns with the process for resolving problems and requesting assistance through "tickets."⁴⁰ These challenges impaired the ability of contractor support staff to address end users' problems, led to end users' disengagement, and increased patient safety risks. The OIG generally found that EHR usability problems, training deficits, interoperability, the need for post-go-live fixes and refinements, and problem-resolution process challenges complicated VHA providers' work. While these specific issues have been resolved, VA should be sure it carefully monitors these points during future deployments. Further, as the reset has led to new and updated system functionality, leaders must be prepared to swiftly manage any consequences from these updates that result in compromised patient care and safety. As the changes employed during the reset are made to the entire new EHR system, this increased alertness is vital not only at newly deploying sites but at all sites that have deployed the new EHR to date.

CONCLUSION

The OIG will continue to conduct rigorous oversight of VA's efforts as it restarts deployments of the new EHR system with a keen focus on patient care and safety, VA staff's ability to efficiently do their jobs, and making the most effective use of taxpayer dollars. The OIG is committed to providing impactful and practical recommendations that flow from its oversight work to help VA efficiently deploy the new EHR in a manner that improves veterans' safety, care, and experiences. As our reports and testimonies over the last five years demonstrate, the OIG has identified

³⁶ Public Law 117-154.

³⁷ VA OIG, *Electronic Health Record Modernization Caused Pharmacy-Related Patient Safety Issues Nationally and at the VA Central Ohio Healthcare System in Columbus*.

³⁸ VA OIG, *Review of Access to Care and Capabilities During VA's Transition to a New Electronic Health Record System at the Mann-Grandstaff VA Medical Center in Spokane, Washington*.

³⁹ VA OIG, *Review of Access to Care and Capabilities During VA's Transition to a New Electronic Health Record System at the Mann-Grandstaff VA Medical Center in Spokane, Washington*.

⁴⁰ VA OIG, *Ticket Process Concerns and Underlying Factors Contributing to Deficiencies after the New Electronic Health Record Go-Live at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, March 17, 2022; VA OIG, *Training Deficiencies with VA's New Electronic Health Record System at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, July 8, 2021.

significant, unresolved deficiencies that have thwarted progress on the new EHR and have contributed to patient harms.

It is incumbent on EHRM-IO, VHA and facility leaders, VA leaders, and Oracle Health to ensure they are providing full transparency in their communications with the veteran community, frontline VA staff, and Congress. Effective program management is critical to the successful deployment of the new EHR. Accountability established through clear roles and responsibilities, meaningful metrics, and close oversight with transparent reporting and swift remediation of any identified issues will all need to be firmly integrated into future efforts. Failures in any of these areas chance cascading problems that put patients at risk, make it more difficult for VA personnel to do their jobs, and perpetuate cost overruns and delays. Chairman Barrett, this concludes my statement. I would be happy to answer any questions you or other members may have.

Prepared Statement of Carol Harris



United States Government Accountability Office

Testimony

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

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ELECTRONIC HEALTH RECORD MODERNIZATION

VA Is Making Incremental Improvements, but Much More Remains to Be Done

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

GAO Highlights

Highlights of [GAO-25-108091](#), a testimony before the Subcommittee on Technology Modernization, Committee on Veterans Affairs, House of Representatives

Why GAO Did This Study

After three unsuccessful attempts since 2001, VA initiated its fourth effort—the EHRM program—to replace its legacy system. In April 2023, after deploying the new system to five of its medical centers, VA paused deployments due to user concerns. On December 20, 2024, VA announced that it was resuming planned deployments in mid-2026 to four Michigan facilities.

GAO was asked to testify on VA's EHRM program. GAO summarized the results of its previously issued reports on EHRM and followed up on implementation of its prior recommendations. GAO also summarized the preliminary results of a draft report currently at the agency for comment that addresses, among other things, VA cost estimating and integrated scheduling.

What GAO Recommends

GAO has previously made 15 recommendations on the EHR modernization in issued reports; 14 of the 15 have not yet been implemented. In its draft report, GAO is making three additional recommendations on cost estimating, schedule, and system metrics. Implementing GAO's recommendations is critical to reducing EHR risks and delivering a quality system within cost and schedule expectations.

View [GAO-25-108091](#). For more information, contact Carol Harris at (202) 512-4456 or HarrisCC@gao.gov.

February 2025

ELECTRONIC HEALTH RECORD MODERNIZATION

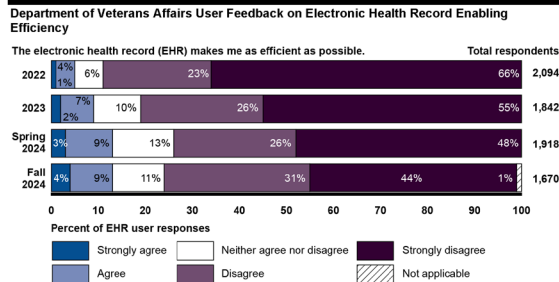
VA Is Making Incremental Improvements, but Much More Remains to Be Done

What GAO Found

From June 2020 to May 2023, GAO issued four reports on the Department of Veterans Affairs' (VA) efforts to implement its electronic health record modernization (EHRM) and made a total of 15 recommendations aimed at improving implementation. Among other things, these recommendations addressed poor user satisfaction, the need for better change management, the pace of system trouble ticket resolution, and the importance of addressing independent operational assessment deficiencies.

Most recently, in its draft report currently at VA for comment, GAO's preliminary results show that VA is making incremental improvements. This includes implementing over 1,500 system configuration changes and initiating projects to address user challenges. However, much more remains to be done:

- As of February 2025, VA had not addressed approximately 1,800 complex configuration change requests.
- The program lacks an updated total life cycle cost estimate that reflects the many EHRM changes and delays. Existing EHRM life cycle cost estimates range from VA's \$16.1 billion to an independent estimate of \$49.8 billion. Updating the independent life cycle cost estimate is imperative to understanding the full magnitude of VA's investment.
- Similarly, it is critically important that VA update its integrated schedule to inform decision-making. Planned system deployment at four additional locations results in about 160 medical centers (94 percent of VA's total number of medical centers) without the new system as of mid-2026.
- The EHRM program did not identify baselines and targets for one of its nine metrics to measure the impact of the new system at the live sites.
- VA's 2024 user surveys continue to reflect general dissatisfaction with the new system. (See figure.)



Source: GAO summary of Department of Veterans Affairs information. | GAO-25-108091

An updated cost estimate and integrated schedule are essential management tools to inform VA of the challenges it faces in moving forward.

United States Government Accountability Office

Chairman Barrett, Ranking Member Budzinski, and Members of the Subcommittee:

Thank you for the opportunity to discuss our work on the challenges that the Department of Veterans Affairs (VA) faces as it works to replace its legacy electronic health record (EHR) system.¹ As you know, VA depends on its EHR system to manage health care for its patients. Since 2017, the department's Electronic Health Record Modernization (EHRM) program has undertaken an effort to replace its legacy EHR system with a modernized, commercial system.

VA first deployed the new EHR system in October 2020 and followed up with further deployments to four additional sites in 2022. In April 2023, VA announced that it planned to halt future deployments to additional sites due to feedback from veterans and clinicians that the new system was not meeting expectations. An exception to this pause was the Captain James A. Lovell Federal Health Care Center in North Chicago that was deployed in March 2024.² On December 20, 2024, VA announced that it was resuming planning for future deployments starting with four facilities in Michigan.

We have previously designated VA health care as a high-risk area for the federal government, in part due to its IT challenges and implementation of EHRM.³ In our 2023 high-risk update, we noted that VA had a number of major modernization initiatives, including the EHR, that faced challenges.

¹An EHR is a collection of information about the health of an individual or the care provided, such as patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports.

²The Captain James A. Lovell Federal Health Care Center in North Chicago is the only fully integrated health care system operated by both VA and the Department of Defense (DOD).

³VA'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); *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: Mar. 2, 2021); and *High-Risk Series: Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas*, [GAO-23-106203](#) (Washington, D.C.: Apr. 20, 2023).

In this statement, I will summarize our prior reports and a draft report that is currently at the agency for comment that describe the challenges in VA's implementation of the new EHR system and the status of improvements.

In developing this testimony, we summarized challenges identified in our prior reports and in a draft report that is currently at the agency for comment on VA's efforts to implement its ERHM. We included results from our recent draft report and incorporated information on the department's actions in response to recommendations we made in our previous reports. The reports cited throughout this statement include detailed information on the scope and methodologies.⁴

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 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

Within VA, the Veterans Health Administration (VHA) operates one of the nation's largest health care systems. The administration relies on its legacy health information system—the Veterans Health Information Systems and Technology Architecture (VistA)—to deliver health care to veterans and to document this care. This technically complex system has been in operation for more than 30 years, is costly to maintain, and does not optimally support VA's need to electronically exchange health records with other organizations, such as the Department of Defense (DOD) and community providers (who are non-VA providers that provide care to veterans and are reimbursed by VA).

The department has undertaken, and we have reported on, a number of initiatives to improve interoperability (i.e., the ability to exchange and use electronic health information) and modernize EHRs across the

⁴GAO, *Electronic Health Records: Ongoing Stakeholder Involvement Needed in the Department of Veterans Affairs' Modernization Effort*, [GAO-20-473](#) (Washington, D.C.: June 5, 2020); *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); *Electronic Health Records: VA Needs to Address Data Management Challenges for New System*, [GAO-22-103718](#) (Washington, D.C.: Feb. 1, 2022); and *Electronic Health Records: VA Needs to Address Management Challenges with New System*, [GAO-23-106731](#) (Washington, D.C.: May 18, 2023).

department.⁵ These initiatives have included four efforts over two decades to modernize VistA. The first three efforts—HealtheVet, the integrated Electronic Health Record (iEHR), and VistA Evolution—reflect varying approaches that the department had taken since 2001 to achieve a modernized electronic health record system. However, these approaches were abandoned due to concerns about project planning, high costs, and undelivered capabilities.

VA's current approach, EHRM, began in June 2017. At that time, the former VA Secretary announced that the department planned to acquire the Oracle Health EHR system—the same commercial system that DOD was implementing across the military health system—and configure it for VA.⁶ According to the Secretary of VA, the department decided to acquire the same system as DOD because it would allow all of VA's and DOD's patient data to reside in one system. A single system is intended to enable seamless care between VA and DOD without the manual and electronic exchange and reconciliation of data between two separate systems.⁷

VA's EHRM Integration Office manages the EHRM program and coordinates with stakeholders (e.g., VHA subject matter experts and site-specific staff) at the facility, regional, and national levels on the transition to a new EHR system. According to the department, EHRM is designed to improve veterans' experiences by establishing a modernized, seamless, and secure EHR for VA. This modernization approach is also intended to improve VA health care providers' ability to deliver care by standardizing

⁵See, for example, [GAO-23-106731](#); [GAO-22-103718](#); [GAO-21-224](#); [GAO-20-473](#); *Electronic Health Records: VA Needs to Identify and Report System Costs*, [GAO-19-125](#) (Washington, D.C.: July 25, 2019); *VA Health IT Modernization: Historical Perspective on Prior Contracts and Update on Plans for New Initiative*, [GAO-18-208](#) (Washington, D.C.: Jan. 18, 2018); and *Electronic Health Records: Outcome-Oriented Metrics and Goals Needed to Gauge DOD's and VA's Progress in Achieving Interoperability*, [GAO-15-530](#) (Washington, D.C.: Aug. 13, 2015).

⁶VA and DOD use the same Oracle Health Millennium system with agency-specific configuration differences. VA refers to its EHR system as the Federal EHR, while DOD refers to its system as Military Health System (MHS) GENESIS. VA contracted with Cerner Government Services, Inc. for the department's new EHR system in May 2018. Subsequently, in June 2022, Cerner was acquired by Oracle Health Government Services, Inc. We use Oracle Health throughout this report.

⁷DOD's initial implementation of MHS GENESIS began in 2017 at four military treatment centers in the state of Washington. The department completed the last of its deployments of the EHR system in March 2024.

clinical practice workflows, enabling interoperability between VA and DOD, and increasing interoperability with community care partners.

The EHRM program originally planned to implement the new EHR system across VA's health care medical facilities in phases over the span of a decade. VA deployed the new EHR system at its first location, the Mann-Grandstaff VA Medical Center in Spokane, Washington, in October 2020. In 2021, VA performed a strategic review of the program and decided to pause new deployments and focus on fixing initial deployment issues.

In fiscal year 2022, VA moved forward with implementation of the system at four additional locations:⁸

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

Following the Roseburg and White City deployments, VA decided to delay upcoming deployments to address feedback from users at the initial sites who identified patient safety and system reliability issues. In addition, it performed an assessment to diagnose and address problems with the governance and processes for deployments.

Around the same time, the department modified a task order performance work statement of the EHRM contract to include seven priority enhancements intended to address related feedback from pharmacists

⁸VHA is divided into areas called Veterans Integrated Services Networks (VISNs). There are currently 18 VISNs throughout VHA based on geographical location. VISNs provide oversight and guidance to the VA Medical Centers and VA Health Care Systems within their areas and are sometimes called a "network." The five initial sites are within VHA's VISN 20 and VISN 10. 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.

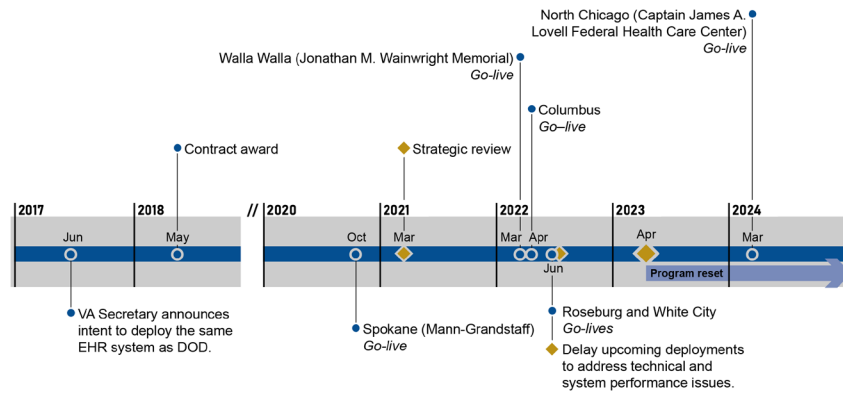
and providers.⁹ In March 2023, VA released a report from a multidisciplinary, enterprise-wide team that assessed concerns and recommended solutions for the most impactful and critical patient safety issues to be fixed before future deployments (referred to as “Go-live”). As part of the review, VA identified 14 critical patient safety issues requiring development or enhancement work.

In April 2023, VA announced that feedback from veterans and clinicians continued to indicate that the new system was not meeting expectations at the five deployed sites. Consequently, the department halted future deployments, with the exception of the Captain James A. Lovell Federal Health Care Center in North Chicago, to focus on making improvements at the five initial sites. VA refers to its current improvement efforts as a program “reset.”¹⁰ Figure 1 depicts a timeline of key program events.

⁹An IT enhancement is any change or modification of an IT solution or service to notably improve capabilities or performance beyond the original implementation through additional functionalities, major error and bug repairs, greater processing speed, or better cross-platform compatibility.

¹⁰The Captain James A. Lovell Federal Health Care Center in North Chicago, Illinois, integrates services previously provided by the former North Chicago VA Medical Center and its community-based outpatient clinics and the Naval Health Clinic Great Lakes and its associated clinics. The Federal Health Care Center provides health care to service members, veterans and other beneficiaries throughout northern Illinois and southeastern Wisconsin. Additionally, the Federal Health Care Center ensures that Navy recruits who pass through Naval Station Great Lakes each year are medically ready. The Federal Health Care Center is part of VISN 12, the VA Great Lakes Health Care System, which serves veterans who reside in Illinois, the Upper Peninsula of Michigan, Wisconsin, and northwestern Indiana.

Figure 1: Department of Veterans Affairs (VA) Electronic Health Record Modernization Program Timeline from 2017-2024



VA = U.S. Department of Veterans Affairs, EHR = electronic health record, DOD = Department of Defense

● Program milestone or deployment

◆ Program assessment or pause

Source: GAO analysis. | GAO-25-108091

Since the program reset began in April 2023, the department has focused resources on fixing issues identified by users and optimizing the system at the deployed sites. Using an incremental approach, the EHRM Integration Office and VHA have identified goals for planning and executing incremental changes aimed at making improvements rapidly at the live sites. Specifically, VA established the following outcome-oriented reset goals:

- ensure that the new system is working as promised for its end users at the first five sites,
- prepare for and deploy the system at the Captain James A. Lovell Federal Health Care Center in North Chicago, and

- invest in foundational work for successful future deployment of the EHR across the enterprise (e.g., improving processes to manage issues for an enterprise system and workforce development).

While the reset efforts continued, VA deployed the new EHR system at the Captain James A. Lovell Federal Health Care Center in North Chicago, Illinois, in March 2024. On December 20, 2024, VA announced that it was beginning early-stage planning for restarting deployments to four sites in Michigan in mid-2026.

For the period of fiscal year 2018 through the third quarter of fiscal year 2024, VA reported that it obligated a total of about \$12.71 billion on EHRM. This total is comprised of the following elements:

- EHR contract (\$5.42 billion)
- IT infrastructure (\$3.11 billion)
- program management (\$1.33 billion)
- VHA (\$2.58 billion)
- Office of Information and Technology (OIT) (\$273 million).

GAO Has Reported on VA's Challenges in Implementing the New EHR

From June 2020 to May 2023, we issued four reports on VA's efforts to implement its EHRM. In May 2023, we reported that the organizational change management activities for the EHRM program were partially consistent with seven leading practices and not consistent with one leading practice.¹¹ We also reported that users expressed dissatisfaction with the new system and VA did not adequately identify and address system issues. We made 10 high priority recommendations to address change management, user satisfaction, system trouble ticket, and independent operational assessment deficiencies. VA concurred with the recommendations. As of February 2025, VA has not yet implemented the recommendations. For example:

- VA has not yet developed and implemented a VA-specific change management strategy to formalize its approach to drive user adoption. According to the department, it worked with its contractor to update the contractor's change management plan to be more VA-specific and stated that VHA and the EHRM program office were collaborating to

¹¹GAO, *Electronic Health Records: VA Needs to Address Management Challenges with New System*, [GAO-23-106731](#) (Washington, D.C.: May 18, 2023).

develop a strategy that was targeted for completion in December 2025.

- VA has not yet adequately demonstrated that it addressed users' barriers to change by ensuring planned completion of actions identified in a strategic review of the program. VA had plans in place to address the open action items through reset initiatives and key priority projects, but the underlying user barriers have not yet been fully addressed.
- VA has not reinstituted plans to conduct an independent operational assessment to evaluate the suitability and effectiveness of the new EHR system for users in the operational environment. As of November 2024, according to VA officials, funding for the project was not approved and VA could not move forward with the action. However, EHRM program officials said that VA was still able to conduct a variety of independent assessments such as independent end user testing.

Our February 2022 report on VA's data management plans discussed migrating data to the new EHR system and supporting the continuity of reporting.¹² We noted that VA had made progress towards implementing planned data management activities, but clinicians faced challenges with the quality of migrated data. In addition, VA had not established performance measures and goals for data quality and had not used a stakeholder register to identify and engage all stakeholders. Accordingly, we made two recommendations to VA to (1) establish performance measures and (2) use a stakeholder register to meet reporting needs. VA concurred and took action to fully implement the second recommendation. However, because the program had paused system deployments and lacked a path to migrating data at the next sites, we do not yet have sufficient evidence to demonstrate that the first recommendation has been implemented.

In February 2021, we reported that VA had made progress toward implementing its new system but needed to postpone further deployment until it had addressed all critical and high severity test findings.¹³ We made two recommendations that it do so, and VA concurred. As of December 2024, the department had made progress toward

¹²GAO, *Electronic Health Records: VA Needs to Address Data Management Challenges for New System*, [GAO-22-103718](#) (Washington, D.C.: Feb. 1, 2022).

¹³GAO, *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).

implementing the recommendations as it had no critical or high-severity test findings at go-live at the four subsequent locations. There were also no critical or high severity test findings at the joint DOD/VA Captain James A. Lovell Federal Health Care Center go-live. We will plan to consider the recommendations implemented when we have observed sustained resolution of significant test findings.

Our June 2020 report found that VA's decision-making procedures for configuring the EHR system were generally effective but did not always ensure key stakeholder involvement.¹⁴ We recommended that the department ensure the involvement of all relevant medical facility stakeholders in the EHR system configuration decision process. VA concurred with our recommendation and stated that it intended to refine local workshop agendas and descriptions to facilitate subject matter expert identification and participation. However, the recommendation has not yet been implemented.

In total, our prior reports included 15 recommendations to assist the department in its efforts. While VA has taken steps to address our recommendations such as initiating key priority projects to address user concerns, as of February 2025, VA had fully implemented one of our 15 recommendations. As VA resumes planning activities for future deployments, we will continue to monitor VA's progress.

VA Had Incrementally Delivered Improvements at the Initial Sites, but Much More Work Remained

Since the EHR deployments were paused and the program reset was announced in April 2023, we stated in our draft report that VA had taken an incremental approach to deliver system improvements. Specifically, our preliminary results indicate that VA made configuration changes to the new EHR system, delivered patient safety and pharmacy enhancements, improved system trouble ticket resolution, and improved system performance for the initial sites.

- **Configuration changes.** A significant part of VA's improvement efforts focused on making configuration changes to the EHR baseline.¹⁵ Specifically, the department reported that it implemented

¹⁴GAO, *Electronic Health Records: Ongoing Stakeholder Involvement Needed in the Department of Veterans Affairs' Modernization Effort*, [GAO-20-473](#) (Washington, D.C.: June 5, 2020).

¹⁵The EHR baseline consists of the commercial software solution operating within the federal environment. Design configuration decisions include determining the data that need to be incorporated into the EHR system. These configurations set up the EHR system to support the work processes that VA clinicians and staff follow in delivering care.

more than 1,500 configuration changes that impacted users at the enterprise level, through its standard configuration change process as of June 2024. These changes addressed user needs (i.e., a requested change) or supported enterprise standards (i.e., a change to support a standardized workflow) and were critical for improving performance and usability for staff at the five initial sites. However, as of September 2024, there were about 2,200 complex configuration change requests that had not yet been resolved. Over the course of the reset, VA developed a revised process for addressing configuration change requests with a tiered escalation process for timely and collaborative problem-solving across facilities. As of February 2025, VA had not addressed approximately 1,800 complex configuration change requests.¹⁶

- **Patient safety and pharmacy enhancements.** VA had closed many, but not all, of its highest-priority patient safety enhancement requests as identified in the department's March 2023 assessment of what needed to be fixed before the future deployments resumed.¹⁷ As of July 2024, according to EHRM program officials, VA had closed nine of 14 highest-priority patient safety related enhancement requests. These enhancements were intended to address items most impactful and critical for patient safety. For example, VA reported that it had addressed the patient safety concern that DOD's system was overwriting VA identity and demographics information. Regarding pharmacy enhancements, VA delivered six of seven pharmacy enhancements identified by pharmacists and providers. However, as of June 2024, VA had not deployed the remaining pharmacy enhancement for synchronization between the system module used by pharmacists and the module used by other health care team members. VA estimated that the pharmacy capability would be delivered with the planned February 2025 system update.
- **Ticket resolution.** VA's data on trouble ticket resolution showed that service level agreement requirements for the percentage of tickets that were resolved within timeliness thresholds were met since the implementation of financial consequences (i.e., financial credits from the contractor to the department in the form of an invoice offset) in September 2023. This was an improvement over earlier data that

¹⁶According to EHRM program officials, there are about 600 new configuration change requests per month.

¹⁷Department of Veterans Affairs, Veterans Health Administration, *EHRM Sprint Report* (March 2023).

showed consistent challenges with resolving trouble tickets prior to July 2023.

- **System outages and incidents.** VA established performance requirements as part of its service level agreement with Oracle Health, which defined expectations that the EHR system operate free from incidents or outages for specific amounts of time. If performance requirements are not met monthly, financial consequences (i.e., financial credits from the contractor to the department in the form of an invoice offset) may apply. The outage-free time (system operates greater than 99.95 percent of the time without reported outages) was met for 14 of 16 months from June 2023 to September 2024. The outage-free time requirements were not met in March and April 2024 due to database bugs. From June 2023 to September 2024, incident-free time (system operates 95 percent of time without any reported incidents) was met for 12 of 16 months and not met for 4 of the 16 months.

However, the preliminary results of our draft report show that much more work remained for VA to implement additional configuration changes and enhancements. Specifically, VA had prioritized a number of complex projects that require additional stakeholder input and coordination. For example:

- According to the EHRM program, referral management within the new EHR system lacks functionality and intuitiveness for users. Further, data exchanges related to referrals experience issues that may cause delays in care and frustration among staff. The related priority project is intended to identify improvements by simplifying existing processes and standardizing referrals across the enterprise, by specialty, into streamlined workflows and tools.
- As another example, according to EHRM program officials, VA does not have a consistent strategy for standardizing and streamlining positions within the EHR, resulting in numerous unused, redundant, or overlapping positions. The priority project related to position standardization is intended to consolidate and reduce the number of standardized user positions (i.e., roles) in the system which could, among other things, relieve users from having to log in and log out to perform different position-specific functions.

Further, the program lacks an updated total life cycle cost estimate and integrated master schedule that reflects the many EHRM changes and delays. In January 2019, VA estimated that its life cycle cost for EHRM would total about \$16.1 billion consisting of the following:

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- The EHRM program contract, awarded in May 2018, was for a maximum of nearly \$10 billion over 10 years.
 - Expected costs for technology infrastructure readiness and program management support were estimated at \$6.1 billion.

In October 2022, the Institute for Defense Analyses issued a final report on an independent cost estimate for the EHRM program. The Institute estimated a total life cycle cost of \$49.8 billion—\$32.7 billion for a 13-year implementation phase and \$17.1 billion for 15 years of sustainment costs.¹⁸

Regarding the program's schedule, the Deputy VA Secretary testified in September 2022 before the Senate Appropriations Committee that the full EHR deployment schedule through 2028 was currently under development and would be ready in the fall of 2022. However, this schedule was not released, due, in part, to the deployment pause announced in April 2023. VA's December 20, 2024, announcement pertained to the four locations in Michigan. VA does not have a deployment schedule for the other approximately 160 VA medical centers and associated clinics.

Following cost estimating and schedule best practices helps minimize the risk of cost overruns and schedule delays for government acquisitions.

- A high-quality, reliable cost estimate is a key tool for budgeting, planning, and managing federal programs. According to federal guidance, generating reliable program cost estimates is a critical function necessary to support the capital programming process.¹⁹ Without this capability, agencies are at risk of experiencing program cost overruns, missed deadlines, and performance shortfalls.

¹⁸According to EHRM program officials, the original VA cost estimate was based on an assumption that the first few deployments to the system for initial operating capability would be more expensive, and as the department progressed towards full-rate production, there would be economies of scale, thus reducing costs. VA officials said that once a revised deployment schedule was developed, the department had plans to develop an updated cost estimate.

¹⁹Office of Management and Budget, *Preparation, Submission, and Execution of the Budget, Circular No. A-11* (Washington, D.C.: July 25, 2024); *Managing Information as a Strategic Resource, Circular No. A-130 Revised* (Washington, D.C.: Executive Office of the President, July 28, 2016); and *Capital Programming Guide v. 3.1: Planning, Budgeting, and Acquisition of Capital Assets, Supplement to Circular A-11* (Washington, D.C.: July 25, 2024).

GAO's *Cost Estimating and Assessment Guide* describes best practices for developing reliable cost estimates that management can use to make informed decisions.²⁰ Among other things, it is important to revise cost estimates to reflect program changes and maintain reliable estimates throughout the life of the program. It is also important to have an independent view of the program to help an organization better understand the risks its program faces and better manage them as they are realized.

- The success of a project also depends, in part, on having an integrated and reliable master schedule that defines when and how long work will occur, and how each activity is related to the others. Integrated master schedules are a consolidation of lower-level project (i.e., subproject) schedules. Among other things, an integrated and reliable schedule can show when major events are expected as well as the completion dates for all activities leading up to them, which can help determine if the program's parameters are realistic and achievable.

We have previously reported in our *Schedule Assessment Guide* that a reliable schedule can provide a road map for the systematic execution of a program and the means by which to gauge progress, identify and address potential problems, and promote accountability.²¹ Following changes in a program, the schedule is used to forecast the effects of delayed, deleted, and added effort, as well as possible avenues for time and cost recovery.

On December 20, 2024, VA announced the decision to restart planning for deploying the new EHR system at four locations in Michigan beginning in mid-2026. In addition, work would continue to make improvements at the initial sites. However, the program did not commit to when it would update the EHRM life cycle cost estimate and integrated master schedule to reflect the changes and lessons learned from the initial deployments and the 20-month deployment pause.

Without updated cost estimates, management and oversight bodies must continue to rely on either the January 2019 VA total life cycle cost estimate of \$16.1 billion, or an October 2022 independent cost estimate

²⁰GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, [GAO-20-195G](#) (Washington, D.C.: Mar. 12, 2020).

²¹GAO, *GAO Schedule Assessment Guide: Best Practices for Project Schedules*, [GAO-16-89G](#) (Washington, D.C.: Dec. 22, 2015).

of \$49.8 billion. However, these prior estimates do not reflect the full magnitude and impact of delays, system changes, and updated processes.²² For example:

- VA's life cycle cost estimate of \$16.1 billion is severely outdated and incomplete. Specifically, it does not encompass the full life cycle of the program through each phase in the program as it estimates only for a 10-year period. It also does not reflect changes that have occurred over the last 6 years.
- The independent cost estimate represents a more realistic assessment of expected costs, but it also does not reflect the pause and other significant changes over the last 2 years. It includes a 15-year sustainment period, reflecting continuing operations and maintenance costs, and uses a more conservative 13-year implementation time frame rather than 10 years.

VA's announcement that system deployment will occur at four additional sites in mid-2026 means that 8 years after contract award, the new system will be deployed at a total of 10 locations. With 2 years remaining on the contract in mid-2026, VA will have approximately 160 remaining medical centers and associated clinics (94 percent of VA's total number of medical centers) that will still be using the legacy system.

According to EHRM program officials, VA learned from the program reset. However, we noted that given the volume of changes, delays, and continuing issues, an updated cost estimate is essential to understanding the magnitude of VA's investment.

Accordingly, in a draft that is currently at the agency for comment, we recommended that VA (1) obtain an updated and independent total life cycle cost estimate using best practices described in GAO's *Cost Estimating and Assessment Guide* and (2) expeditiously and reliably update its integrated master schedule using best practices described in GAO's *Schedule Assessment Guide*.

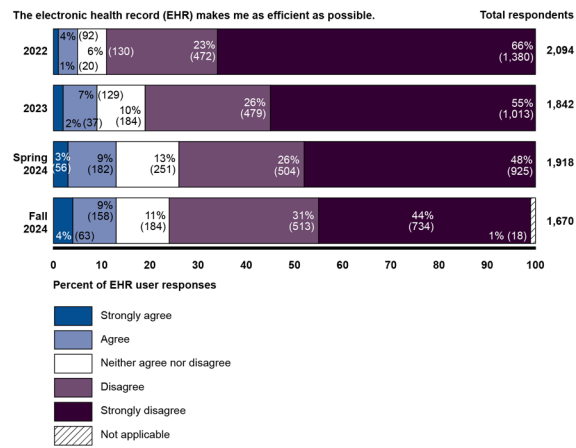
²²The VA Office of Inspector General previously reported on the differences in cost estimates from \$16 billion to almost \$50 billion. The VA Office of Inspector General reported that the EHRM Integration Office, which is responsible for preparing VA to deploy the EHR system, was working on updating the program cost estimate as of June 2024. See, VA Office of Inspector General, *VA Needs to Strengthen Controls to Address Electronic Health Record System Major Performance Incidents*, 22-03591-231 (Washington, D.C.: Sept. 23, 2024).

Feedback Indicated
Improvement, but
Dissatisfaction with EHR at
Initial Sites Persisted

VA's user satisfaction surveys indicated improvement since 2022, but about half of respondents continued to disagree or strongly disagree that the system enabled them to deliver high-quality care.²³ For example, in 2022, 5 percent (112 of 2,094) of users responding to the survey agreed or strongly agreed that the system made them as efficient as possible. In September 2024, 13 percent (221 of 1,670) agreed or strongly agreed that the system made them as efficient as possible. However, 75 percent (1,247 of 1,670) disagreed or strongly disagreed that the EHR made them as efficient as possible (see figure 2).

²³In 2022, VA surveyed users of the new EHR system from Veterans Integrated Services Networks (VISN) 10 and 20 and about 20 percent (2,102 of 10,400) of recipients responded to the survey. In 2023, VA surveyed users from VISNs 10 and 20 and about 26 percent (1,845 of 7,072) of recipients responded to the survey. The March-April 2024 EHR User Experience Survey included provisioned Federal EHR users from five live sites and remote service providers and did not include users from the joint DOD/VA Captain James A. Lovell Federal Health Care Center. About 25 percent (2,081 of 8,289) responded to the survey. The September 2024 User Experience Survey included provisioned EHR users from five live sites, and remote service providers and did not include users from the joint DOD/VA Captain James A. Lovell Federal Health Care Center. About 19 percent (1,871 of 9,747) responded to the survey.

Figure 2: Department of Veterans Affairs User Feedback on Electronic Health Record Enabling Efficiency



Source: GAO summary of Department of Veterans Affairs information. | GAO-25-108091

Note: The VA user surveys were conducted in September 2022, August-September 2023, March-April 2024, and September 2024.

Similar to VA's survey results, most users we interviewed said that the system generally decreased productivity. Specifically, 54 of 71 reported that the EHR decreased or greatly decreased productivity, 14 of 71 reported that it neither increased nor decreased productivity, and one of 71 respondents said that it had increased productivity (see table 1).²⁴

²⁴Two users responded that they had no basis to judge.

Table 1: Feedback from Selected Users on the Effect of the Department of Veterans Affairs' New Electronic Health Record (EHR) System on Productivity

	How has the new EHR system affected your productivity?
Greatly increased productivity	0
Increased productivity	1
Neither increased nor decreased productivity	14
Decreased productivity	30
Greatly decreased productivity	24
No basis to judge	2
Total	71

Source: GAO analysis of interviews with Department of Veterans Affairs officials. | GAO-25-108091

With respect to how the new EHR system had affected their productivity, the users we interviewed also provided examples of their concerns. These examples discussed anecdotal experiences with reductions in the amounts of patients that could be seen daily, needs for additional staff, and a backlog of referrals. On several occasions, users discussed their frustration with the increase in the number of steps required to complete actions in the system.

VA Had Begun Monitoring Performance Measures but Had Not Fully Defined Targets

According to federal guidance, performance measures allow the program the ability to measure and communicate the benefits intended and achieved by the program.²⁵ Leading practices for performance measures include:

- developing measurable outcome-based goals;
- identifying and documenting metrics to measure outcomes of the program against goals; a range of indicators is important because most program activities require managers to balance their priorities and programs may seek to measure areas such as organizational efficiency and customer (user) satisfaction;

²⁵Office of Management and Budget, *Preparation, Submission, and Execution of the Budget, Circular A-11, Part 6: The Federal Performance Framework For Improving Program And Service Delivery* (Washington, D.C.: July 25, 2024); General Services Administration, *Modernization and Migration Management (M3) Playbook*, accessed Aug. 7, 2023, <https://www.usssm.gov/m3>.

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- establishing baseline measures to serve as a comparison for current performance metrics and define success targets expected to be achieved by the program; and
 - monitoring performance and report objective results to inform decisions, identify areas for process improvement, and take appropriate corrective action.

The preliminary results of our draft report show that VA identified performance measures for the new EHR reset in accordance with federal guidance. Specifically, VA developed four categories for outcome-based goals for reset success. They are to:

- improve end user and veteran experience,
- improve health system operations,
- sustain high performance and high reliability of the system, and
- mature program processes.

Further, VA identified and documented nine focus metrics aligned to the goal categories to measure and track progress over time. These metrics were selected from existing data. These metrics are:

- percentage of staff who agreed that the EHR provides them with the ability to provide quality care,
- time in EHR per patient seen for primary care/family medicine specialties,
- sites projected patient workload as a percentage of the veterans integrated services network patient weighted workload for performance based funding allotments,²⁶
- percent total collections to expected results,
- productivity work relative value units for clinical full-time equivalents,
- incident-free time,
- number of crashes a user experiences,
- time to user-acknowledged incident ticket resolution in days, and
- time to user-acknowledged change request ticket resolution in days.

²⁶VA uses a measure called the patient-weighted work to measure workload and account for factors such as patient volume, case-mix, and specialized services.

The EHRM program identified baselines and targets for eight of nine metrics to measure the impact of the new system at the live sites. However, VA had not established baselines and targets for one metric: the time to user-acknowledged ticket resolution for change requests. According to EHRM program officials, VA had not fully defined the baselines and targets for its metrics because it recently implemented a revised process for addressing configuration change requests at the end of August 2024.

In September 2024, VA began to measure and report on progress toward targets. Specifically, the EHRM program reported meeting its targets for four of the eight metrics for which it had established targets. For example, VA had met its target for the time spent in the EHR per patient seen for primary care or family medicine, patient weighted workload for performance based funding allotments, incident-free time, and user interruptions. However, VA had not yet met its targets for percentage of staff who agree that the EHR provides them with the ability to provide quality care, collected income, productivity, and time to user acknowledged ticket resolution metrics for tickets and change requests. Metrics are an important set of tools for the department to determine program and system improvements. Establishing all nine of the baselines and targets will provide VA management with complete information on program performance.

Accordingly, in our draft report, we are recommending that VA identify baselines and performance targets for all nine identified metrics intended to measure program and system performance.

In conclusion, the challenges facing VA's EHRM have resulted in delays in delivering improvements to the system. While the department has indicated its readiness to plan for future deployments, it has not provided updated information on how long it will take to complete the modernization nor reliable estimates for how much it will cost. There is also much work to be done to demonstrate that our prior recommendations have been addressed and that improvements made to date are enough to reduce program risks and ensure that VA is delivering a quality system.

Further, in our draft report that is currently at the agency for comment, we stated that VA was working to improve the system and address concerns from the five initial sites as it emerged from a 20-month deployment pause. However, VA has not updated its total life cycle cost estimate and integrated master schedule to reflect the reality of the program and the

impact of delays, system changes, and updated processes. VA also has not finalized one baseline and target for its metrics, which can provide department leadership with important information of program performance. We plan to make three additional recommendations regarding these issues. Implementing our prior 15 recommendations as well as the three planned recommendations is critical to VA reducing program risks and delivering a quality system.

Chairman Barrett, Ranking Member Budzinski, and Members of the Subcommittee, this concludes my prepared statement. I would be happy to answer any questions that you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions about this testimony, please contact Carol C. Harris 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.

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