

**ELECTRONIC HEALTH RECORD
MODERNIZATION DEEP DIVE: CAN
THE ORACLE PHARMACY SOFTWARE
BE MADE SAFE AND EFFECTIVE?**

HEARING
BEFORE THE
SUBCOMMITTEE ON TECHNOLOGY
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OF THE
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C O N T E N T S

THURSDAY, FEBRUARY 15, 2024

	Page
OPENING STATEMENTS	
The Honorable Matthew M. Rosendale, Sr., Chairman	1
The Honorable Sheila Cherfilus-McCormick, Ranking Member	8
WITNESSES	
Mr. Neil Evans, M.D., Acting Program Executive Director, EHRM Integration Office, U.S. Department of Veterans Affairs	3
Accompanied by:	
Mr. Thomas Emmendorfer, Pharm.D., Executive Director, Pharmacy Ben- efits Management Services, Veterans Health Administration, U.S. Department of Veterans Affairs	
Mr. Robert Silverman, Pharm.D., Chairman, EHRM Pharmacy Council, Veterans Health Administration, U.S. Department of Veterans Af- fairs	
Mr. David Case, Deputy Inspector General, Office of Inspector General, U.S. Department of Veterans Affairs	5
Mr. Mike Sicilia, Executive Vice President, Oracle Corporation	7
APPENDIX	
PREPARED STATEMENTS OF WITNESSES	
Mr. Neil Evans, M.D. Prepared Statement	35
Mr. David Case Prepared Statement	39
Mr. Mike Sicilia Prepared Statement	59

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

The subcommittee met, pursuant to notice, at 8:03 a.m., in room 360, Cannon House Office Building, Hon. Matt Rosendale (chairman of the subcommittee) presiding.

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

Also present: Representatives Schneider, and McMorris-Rodgers.

**OPENING STATEMENT OF MATTHEW M. ROSENDALE,
CHAIRMAN**

Mr. ROSENDALE. Good morning. The subcommittee will come to order.

Before we proceed, I would like to ask unanimous consent that Representative McMorris-Rodgers and Representative Schneider be permitted to participate in this hearing. Without objection, so ordered.

I want to welcome our witnesses back to discuss VA's continued struggles with the Oracle Cerner pharmacy software. I want to thank Ranking Member Cherfilus-McCormick for proposing that we return to this subject.

The situation we found in our previous hearing in May of last year was dangerous and unsustainable, and it seems much the same today. Simply put, the medical centers using the Oracle Cerner Electronic Health Record (EHR) have been turned upside down. They have had to increase their pharmacy staffing by at least 20 percent to navigate all the bugs and workarounds, just to process roughly the same volume of prescriptions. The cost? Millions of dollars. These are just five small-, medium-sized hospitals. VA projects that large, complex medical centers will have to increase their pharmacy staffing by as much as 60 percent to navigate the software's problems.

If the EHR was implemented throughout the Veterans Health Administration (VHA), those personnel costs would quickly run into the hundreds of millions of dollars. That is money that could otherwise fund veterans' healthcare, fight homelessness, or ren-

ovate aging hospitals. It is all to prop up a system that is clearly inferior to what the VA has today, which is Veterans Health Information Systems and Technology Architecture (VistA).

On top of the added cost, it creates a dangerous situation. Nearly 20 percent of the patient safety reports from the five medical centers are related to the pharmacy. Office of Inspector General (OIG) has come forward with alarming new findings. Mr. Case's office discovered widespread errors in VA's internal drug codes and the health data repository (HDR).

When veterans are treated at a facility using the Oracle EHR and then treated at a facility using VistA, their medication information may be incorrect. That means drug-to-drug interaction checks and allergy checks may be based on inaccurate information. According to the OIG, this problem may affect at least 250,000 veterans, and it has been going on for years.

In one incident that OIG documented, a veteran in a VA residential treatment facility was repeatedly denied his medication because it was showing inactive in the system. It took 5 days for the veteran to convince the staff that he needed the medication, but by then, he was in danger and had to be transferred to the emergency room. That is just one. We have got 250,000 veterans that have been having these problems with the pharmacy.

An Oracle software update last April corrected some of the system errors, but there is still no solution to many of the others. However, VA still has not notified, has not notified, any of the veterans who were impacted or are still being impacted. Apparently, the VA has been hiding this problem.

According to the OIG, the Department took no action to go back and correct the veterans' medication information in the health data repository after the April software update resolved the underlying error. Instead, the VA has been quietly waiting for the prescriptions to expire and the inaccurate medication information to fall out of the backend of this data base. VA seems to have been concealing the errors that are still ongoing. This is a breach of trust and it is absolutely unacceptable.

I question what other dangerous pharmacy problems have not even been uncovered yet. What we do know is that the results of the VA and Oracle strategy to improve the EHR have been one step forward and one step backward. We are not gaining on this.

Two and a half years ago, the pharmacists in the field created a list of 79 problems with the pharmacy software. VA prioritized 7, 7 of the 79, and Oracle rolled out fixes over a series of software updates. The most recent, called Block 10, happened a few days ago.

The most important fix aimed to eliminate the confusing, error-prone double-entry process in the core EHR pharmacy software and medication manager retail, which is used for the mail, outpatient pharmacies, and community care. This originally went live in April 2023, software update, but the VA had to immediately roll it back because it caused yet another problem with dosage instructions getting lost. The fix was supposed to happen again a few days ago, but it was postponed due to testing problems.

This particular item demonstrates the larger issue. These are piecemeal, painfully slow improvements to software that seem to be

fundamentally inferior to VistA. Is anybody starting to hear this reoccurring theme?

They involve VA paying Oracle most of the cost to overhaul the system that the VA already bought. This is the complaint that I have had from the very beginning. This is a firm, this is a corporation that continues to get enriched by trying to develop a program at the taxpayers' and the veterans' expense. They are being used as guinea pigs, and everyone else on this committee recognizes it.

Even worse, many of the changes introduce new complications, unexpected errors, and safety risks that the pharmacists have to manage with yet more workarounds. The VA pharmacists are telling us very clearly that they are fed up and they cannot do this forever.

We are way past piecemeal solutions, and we are not going to tolerate the VA sweeping any more dangerous errors under the rug. The definition of insanity is doing the same thing over and over again while expecting a different outcome, a different result. I have come to believe that this continuing effort to transform the Oracle Cerner pharmacy software into something completely different is insanity.

With that, I conclude my remarks.

Mr. ROSENDALE. Representative Cherfilus-McCormick, are you prepared to—

Ms. CHERFILUS-McCORMICK. Can you defer and start with the witnesses?

Mr. ROSENDALE. Sure, sure, sure. Okay. We are going to jump in with the witnesses.

Okay. I will now introduce the witnesses on our first and only panel today. First, from the Department of Veterans Affairs, we have Dr. Neil Evans, the acting executive director of the Electronic Health Record Modernization Integration Office (EHRM-IO). We also have Dr. Thomas Emmendorfer, the executive director of Pharmacy Benefits Management Services; and Dr. Robert Silverman, the chairman of the Electronic Health Record Modernization (EHRM) Pharmacy Council. Next, from the VA Office of Inspector General, we have Deputy Inspector General David Case. Finally, from Oracle, we have Mr. Mike Sicilia, executive vice president for Global Industries.

Gentlemen, if you would please stand. I ask the witnesses to stand and raise your right hands.

[Witnesses sworn.]

Mr. ROSENDALE. 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 the VA.

STATEMENT OF NEIL EVANS

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

As has been mentioned, I am accompanied by Dr. Thomas Emmendorfer, our executive director for Pharmacy Benefits Man-

agement, and Dr. Rob Silverman, our Pharmacy Council co-chair for the Electronic Health Record Modernization effort.

Before I speak to pharmacy directly, the focus area for this hearing, I would like to take a moment to reflect on the EHR modernization program more broadly. Specifically, the program reset that we announced in April 2023.

As you know, having listened to veterans, VA staff, and Congress, including this subcommittee, VA stopped work on future deployments of the Federal EHR, except for the upcoming deployment at the James A. Lovell Federal Health Care Center (FHCC). VA did this to prioritize improvements in support of more than 10,000 users at 5 medical centers, 22 clinics, and 52 remote sites using the new system, and to optimize VA's enterprise readiness to successfully resume deployments at a pace conducive to a complete and successful rollout.

As we have said before, we are committed to getting this right. Even beyond the benefits of a shared record with our Federal partners, within VA itself transitioning to a single instance enterprise-wide electronic health record will provide significant value, allowing easier visibility of a veteran's complete health record regardless of where they receive care, allowing standardization of clinical and business processes across the VA enterprise, reducing variation and increasing the consistency of care delivery, and allowing for better sharing of clinical resources and expertise across VA's regional and national networks.

The Lovell Federal Health Care Center in North Chicago, Illinois, a jointly run VA and Department of Defense (DOD) facility, has been another priority for us during the current program reset. This is the final deployment of the Federal EHR at a DOD site and will also be the first VA deployment at a larger and more complex VA healthcare facility. We are still on track to go live at FHCC in early March.

Let us transition now to the focus of this hearing, the pharmacy software capabilities being implemented as part of the Federal EHR. Improving pharmacy functionality includes addressing the needs of three key stakeholders in both the inpatient and the outpatient settings: VA clinicians who are prescribing pharmaceuticals and counseling veterans about how those medications fit in their overall care; VA pharmacists and the pharmacy staff who fulfill those prescriptions, manage pharmacy inventory, backend pharmacy processes, while also providing valuable counsel to veterans; and, of course, the veterans themselves as they access their prescriptions, refills, and more.

The scale of VA's pharmacy operations is also worth noting. On the outpatient side alone, VA pharmacists and staff manage upwards of 146 million prescriptions each year, and VA's mail fulfillment services reach more than 350,000 veterans every day.

Unlike many other healthcare systems, VA pharmacists and pharmacy staff are fully integrated into patient care teams, both inpatient and outpatient. The division that exists between the health system and retail pharmacies in the private sector simply does not exist in VA.

In part because of the uniqueness of VA's pharmacy care delivery model and in part based on lessons learned since our initial imple-

mentation of the Oracle Health Record at the Mann-Grandstaff VA Medical Center in Spokane, we have been working to continuously improve the Oracle Health software solutions and VA pharmacy operations as they leverage the new software.

Over a year ago, the EHRM Pharmacy Council, along with Oracle Health, helped identify critical early items to be sequentially addressed through code upgrades, which are delivered through joint VA-DOD block releases. Improvements have been delivered in each of the last three block upgrades, blocks 8, 9, and 10, in February and August 2023, and finally, as has been mentioned this past weekend.

Where are we? We have made incremental but steady progress. The most significant improvements have been realized in system performance and in the clinician ordering experience. There have also been several enhancements delivered to improve the pharmacy fulfillment process, but this is an area where further work remains to enable increased efficiency for pharmacy staff.

As of today, all but one of the initially identified priority enhancements have been delivered. The final feature, which will automate the synchronization of prescription information between the Oracle provider and pharmacy applications, has been installed but is not yet enabled.

Both Oracle and VA recognize that we are not yet done. As I already mentioned, an area of considerable focus will be increasing how efficiently pharmacists and pharmacy techs can complete necessary tasks within the software suite, among other improvements.

In conclusion, VA pharmacists, providers, and veterans alike deserve a system, including ongoing enhancements, that performs as promised and continues to keep pace with their unique demands. My expectation is that this will continue to be a shared priority for both VA and Oracle, and that Oracle will remain committed to their promises, including those made in front of the subcommittee, to prioritize and accelerate the work on pharmacy matters.

Thank you again for the opportunity to testify today.

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

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

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

STATEMENT OF DAVID CASE

Mr. CASE. Chairman Rosendale, Ranking Member Cherfilus-McCormick, and subcommittee members, thank you for the opportunity to discuss the OIG's oversight of the new EHR's pharmacy functions.

Since April 2020, we have published 16 reports on EHRM, 9 of them related to significant patient safety concerns, such as issues with medication management, pharmacy software, and patient care coordination. I will discuss three upcoming draft reports that are currently under review at VA, consistent with our report process. While we do not usually discuss reports before publication, due to this hearing's timing, I will generally describe our findings.

First, an OIG team reviewed pharmacy-related patient safety issues facing every VHA provider. VA has corrected one of a series of issues related to the transmission of inaccurate medication information into a data base called the HDR, which stores clinical information about every patient's medications and allergies. However, we are concerned about unresolved and insufficiently communicated pharmacy-related patient safety issues.

Legacy EHR sites may have inaccurate medication information for patients treated at both legacy and new EHR sites. We believe EHRM-IO and Oracle did not test for medication and allergy data accuracy after that information was transmitted to the HDR from new EHR sites. Thus, patients seen at both new and legacy EHR sites may be prescribed contraindicated medications, and legacy EHR providers may be making clinical decisions based on inaccurate data.

My written statement discusses a veteran who had a delay in receiving critical medication due to this issue. As of September 2023, there have been approximately 250,000 veterans who either received medication orders and/or had medication allergies documented in the new EHR. They may be unaware of the potential risk for a medication or allergy related event if they visit a legacy EHR site.

While VA is taking efforts to reduce this potential, we remain concerned that patients have not been informed of their individual risk, essentially being excluded as full participants in their care. Nor have we seen evidence that VA has sufficiently notified legacy EHR providers about this issue and the mitigations to safely care for these new EHR site patients. While legacy site leaders were told to have providers perform manual medication safety checks to replace the automated checks for new EHR patients, these manual safety checks are complex and rely on the vigilance of pharmacists and frontline staff.

At Columbus, we found a prescription backlog required a permanent 62 percent increase in clinical pharmacists, pharmacy leaders had to create their own workarounds and education materials, and pharmacy staff were burned out and had low morale. These findings are troubling given the mitigations for pharmacy failures rely on staff vigilance.

Although unrelated to pharmacy, I wanted to alert you to two other upcoming OIG reports on scheduling, which also address issues requiring high levels of staff vigilance and inadequate mitigations. The first addresses problems with the displaced appointment queue that can cause staff to not handle appointments needing to be rescheduled when a provider's schedule changes. Schedulers report appointments do not always route to the queue and may disappear from it. EHRM-IO told us that February and April updates would address these defects.

Further, the new EHR still cannot switch an appointment time between in-person, VA Video Connect, or telehealth without the scheduler canceling the appointment and the provider ordering a new appointment, creating a burden on both.

The last report found VHA is allowing mental health staff at new EHR sites to make two fewer attempts to contact no-show patients compared to legacy sites. This procedure creates a different stand-

ard of care, a disparity among veterans at new and legacy sites. VHA should address administrative barriers created by software deficiencies without compromising patient care and engagement standards.

In conclusion, EHRM's success is dependent on VA's transparency, careful planning, and the recognition and remediation of patient safety issues. Additionally, trust in VA is contingent on patients and providers being fully and quickly advised when issues are identified.

Chairman Rosendale, 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. ROSENDALE. Thank you very much, Mr. Case. The written statement of Mr. Case will be entered into the hearing record.

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

STATEMENT OF MIKE SICILIA

Mr. SICILIA. Chairman Rosendale, Ranking Member Cherfilus-McCormick, and members of the subcommittee, thank you for inviting me here today.

At the five live VA medical centers and their associated facilities, veterans are receiving their outpatient prescriptions at the pharmacy window in an average of 25 minutes for January 2024, which is below VA's 30-minute key performance metric. On average, more than 215,000 outpatient prescriptions are being filled each month. The current live sites do not have a backlog in filling prescriptions.

Since the first appointment in October 2020, 4.3 million prescriptions have been filled through VA's mail pharmacy. This number of prescriptions is in line with historic prescription fill volumes. Veterans are receiving their medication in a timely manner.

We know that VA has increased pharmacy staffing, and we continue to partner with VA to find efficiency opportunities while maintaining the benefits of the new capabilities. Some tasks, like reviewing the warning information on an allergy or drug interaction and marking it as reviewed, may take a little longer, but also provide enhanced safety protocols.

We are also aware that VA is considering additional enhancements that may further adapt the system to VA's unique pharmacy needs. We have already delivered seven enhancements, six of which are live today, that adapt the pharmacy system to a more bidirectional system between providers and pharmacists.

As you are aware, the VA pharmacy processes are different from most of the commercial sector. We remain confident that our work to update the entire EHR system, including pharmacy, to a modern, stateless web application, along with moving the EHR system to the cloud, will provide a basis for a much more user friendly interface and experience. New stateless web technology is already in the hands of our commercial customers in beta format, with general availability planned for later this year.

Finally, we know that the work being done now with VA to standardize and simplify workflows and procedures will pay dividends in improving the overall pharmacy and EHRM experience.

We acknowledge that for these early sites, pharmacy has been challenging. Shortly after the acquisition in June 22, when I came to the Hill and met with congressional stakeholders on EHRM, improving pharmacy was one of the top complaints I heard. We listened, received the required changes on contract from VA, and delivered them in an expedited fashion.

When the Lovell Federal Health Care Clinic in North Chicago goes live next month, the providers and pharmacists there will start using the system with the current enhancements. They will also start with much improved training. During a visit last week by VA and the Oracle team to Lovell, feedback from pharmacists was positive about the training and readiness for using the new pharmacy system. We are anxious to evaluate the deployment and get feedback from the pharmacist at Lovell. It will provide valuable insight along with the continued review of the feedback from other live sites for other enhancements that may be required as we seek to continually improve the system.

Oracle looks forward to continuing to provide VA with a pharmacy module in the new EHR that enables veterans to receive their medication when they need it and safely. Thank you.

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

Mr. ROSENDALE. Thank you, Mr. Sicilia, for your comments. The written statement of Mr. Sicilia will be entered into the hearing record.

I will now recognize Representative Cherfilus-McCormick for opening statements.

**OPENING STATEMENT OF SHEILA CHERFILUS-MCCORMICK,
RANKING MEMBER**

Ms. CHERFILUS-McCORMICK. Thank you, Mr. Chairman, and thank you to the witnesses for being here today to discuss what progress has been made to fix the issues with Oracle Cerner's pharmacy application.

It has now been over three years since Cerner Millennium was deployed at Mann-Grandstaff Virginia Medical Center. In that time, we have continually heard from VA providers, the Inspector General (IG) and the Government Accountability Office about issues with the system that have put veterans at risk and made VA employees' jobs unbearable. The new EHR has required a herculean effort to ensure that veterans receive safe healthcare, which has had a dramatically negative effect on employee satisfaction.

Late April, VA finally listened to those concerns and to the concerns raised by the committee and undertook a reset of that program. I applaud that reset during our pharmacy hearing last May, and I still applaud it. However, I am extremely concerned about the fact that VA and DOD plan to deploy the system at the Captain James A. Lovell Federal Health Care Center next month before the objectives of the reset have been met.

In December, committee staff traveled to Lovell to meet with leadership and frontline staff. It was clear then that the VA providers were not convinced that the software was ready. In fact, Lovell's pharmacy leadership indicated that they did not feel like anything had changed.

While I understand that the DOD is motivated to finish its deployment, that cannot come at the expense of our veterans or VA providers. I hope the VA's decision-makers are being incredibly deliberative in deciding whether or not to go live should be allowed to happen as scheduled.

In an effort to address some of these issues plaguing the system, Oracle Cerner and VA deployed the much awaited Block 10 upgrade this past weekend. I understand that there were some major pharmaceutical enhancements expected to be delivered with it, but not all of them were working correctly and some of them deployed without even being turned on. I hope to hear about VA and Oracle's plan to fix the issues and their timeline for turning them on.

As for the rest of the upgrade, it is probably too early to know for sure, but I hope to hear how it went and how VA is going to measure the impact of those changes. VA providers have been struggling far too long under the weight of the mitigation efforts.

I am still optimistic that there is a path to success for this project, but not without major changes to the way the VA has been managing it. That is why I, along with Chairman Bost, cosponsored Ranking Member Takano's EHR Program Reset Act last Congress and am still working with my colleagues across the aisle to ensure that we put adequate rail guards around VA's work.

I look forward to hearing from our witnesses today, and I yield back, Mr. Chairman.

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

We are now going to proceed to questioning and I recognize myself for 5 minutes.

Mr. Case, your office uncovered a multitude of pharmacy problems. Will you please explain how the errors involving the health data repository and the medication identifiers work and how they can cause veterans' drug-to-drug interaction and drug allergy checks to be inaccurate?

Mr. CASE. Yes, sir. I will start with how the HDR stores clinical information for all VHA patients, including a unique identifier referred to as a "VUID" for any medication. For a veteran getting a prescription at a new EHR site, after the prescription is filled, the system sends the prescription data, including the VUID, to the HDR. If that veteran goes to a legacy or VistA site and receives a new prescription, another program in VistA accesses the HDR to perform a safety check and make sure the medications prescribed at the legacy site are compatible with the prescriptions from the new EHR site.

It was discovered that when the legacy system goes to access information from the HDR, there are times that the medication information in the HDR from the new EHR would not be accurate, or could be duplicative, or simply be missing. The result is that when this check occurs, when a veteran has gone to a new EHR site and is now at the old EHR site getting a prescription, it could be based on inaccurate information.

Mr. ROSENDALE. Mr. Case, what happens when a drug interaction check or drug allergy check is based on the wrong medication?

Mr. CASE. When a medication check is based on wrong information, or a provider could prescribe a medication that is contraindicated, meaning there may be side effects, or there may be less efficacy to one or more medications.

Mr. ROSENDALE. When we hear Mr. Sicilia talking about all of the medications that are going out and being delivered, if they are not the proper medications or there could be interaction problems between the medications that are being delivered to the veteran, have we really accomplished anything?

Mr. CASE. Right. As I understand the data referred to earlier, he is talking about prescriptions at the new EHR sites, and that information will be accurate when you compare information from the new EHR for prescription one to prescription two. The risk occurs when there is a prescription at the new EHR and veterans, snowbirds, people travel, they get their healthcare at old sites as well as new EHR sites, so when they travel and go to an old site and a new prescription is done, that is when the risk occurs.

Mr. ROSENDALE. Exactly. Again, is it more important to have the number of prescriptions being delivered or make sure that the number of prescriptions is accurate?

Mr. CASE. The most important thing, in our mind, is patient safety.

Mr. ROSENDALE. Thank you. Mr. Case, how did you determine the two patient populations that may be impacted, and how did you come up with that total of 250,000 unique veterans?

Mr. CASE. Yes. That number was provided to us by VHA, and those populations are of unique patients at new EHR sites who had prescribed medication and or documented allergies. That 250 is the ones that are risk if they go to a legacy EHR.

Mr. ROSENDALE. Mr. Case, those numbers are based on information the VA gave you in September 2023, correct?

Mr. CASE. That is correct.

Mr. ROSENDALE. Okay. Do you have any idea how many veterans may be impacted today?

Mr. CASE. We do not know how that number has been modified. We are not aware of what actions have been taken by VA since our report, so VA is in the best position to update that number.

Mr. ROSENDALE. Okay. We still could have many more than the 250,000.

Mr. Sicilia, according to the OIG, Oracle built the interface to the health data repository that contained the coding error, and Oracle corrected one of the group of errors in April 2023. The other group of errors has not been fixed and continues as we speak. Is any part of that inaccurate?

Mr. SICILIA. My understanding is that we have delivered 10 fixes, 10 data files to HDR to correct the data base between May 2023 and November 2023, which corrects the drug interaction and potential duplication checks within the VA.

Mr. ROSENDALE. Why do I hear about the system that was just introduced 3 days ago that was actually pulled right back off again to help address this problem if a problem has already been addressed?

Mr. SICILIA. There was a final testing check that did not pass.

Mr. ROSENDALE. In other words, we are still working on the same problem that you are trying to tell me that was resolved last year?

Mr. SICILIA. There was another issue that surfaced in the testing of one of the seven enhancements that was fixed again last night. The testing begins today. In the interest of patient safety, we decided, of course, not to roll out anything that did not pass all final safety checks.

Mr. ROSENDALE. Sure. Mr. Case, please help me to understand this, because Mr. Sicilia seems to think that the fixes that they rolled out last year resolved this problem, and yet the one that he is trying to roll out here within the last 3 days is to address the same problem. I am confused. Could you clarify?

Mr. CASE. Right. The Block 10 addresses a set of issues that they have identified, among others, in pharmacy. What we have identified in our report has been ongoing, and to our understanding, there is no fix. That is the risk when a patient gets prescriptions at a new EHR site, and then goes to a legacy EHR site. The fact that there may be inaccurate information in the HDR from the new EHR is still extant, unless it is been fixed since September when we got our data.

Mr. ROSENDALE. Thank you very much.

I will now recognize Representative Cherfilus-McCormick for 5 minutes of questioning.

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

Mr. Sicilia, during our last hearing on the pharmacy issues, we discussed the corrupted data going into the health data repository and how it was impacting VA's ability to prevent dangerous drug interactions and allergies. Why was not this issue caught in testing before the interface was turned on?

Mr. SICILIA. Thank you very much for the question. It is a good question.

The testing around this process is very manual. It is very rigorous. You know, when we become aware of these issues and things like this happen, we did fix these issues immediately and stop any deployment of anything until this was fixed.

Why it actually was not caught, I am not exactly sure. I am happy to reply back in writing as to what corrective actions have been taken. That combination of testing involves Oracle, it involves the VA, it involves the pharmacy councils, and I am not exactly sure on that particular issue where the breakdown was. Once it was discovered, once it was discovered, we did fix it, and we did offer fixes to the VA immediately.

Ms. CHERFILUS-McCORMICK. Do you believe that there is an issue with fixing the testing process?

Mr. SICILIA. I do not believe that there is a core issue with the testing process. I think the issue is that there are a lot of manual checks, meaning that human beings have to be involved in testing. Typically, you want to try to automate as much of that testing, particularly for interfaces, as you possibly can. I think we continue to work together with VA to make that process more efficient.

I think the fact that what we saw happen in these last couple days where we did not deploy something because it did not pass a test is a testament to a much better testing process. You obvi-

ously do not want to deploy something and then find an issue after it is deployed. Much rather, in the interest of patient safety, not deploy something that does not pass a particular safety check. That is exactly what happened. We got the feedback, we redeployed that.

Again, as I said, that has now been addressed last night. Testing will continue for the next 2 weeks.

Ms. CHERFILUS-McCORMICK. Are you making any accommodations or alterations to ensure that future issues are caught before they are deployed?

Mr. SICILIA. We are, and I think that, again, not to be repetitive, but this issue is exactly a result of the enhanced testing processes that we put in place. It is possible that prior to the enhanced testing processes that we put in place, together with VA VHA, that there could have been a miss and somebody may have missed something that should not have been rolled out.

Ms. CHERFILUS-McCORMICK. Mr. Case, what should VA and Oracle do to improve its testing before deploying the new EHRM functions?

Mr. CASE. Yes, I mean, clearly it has to be an end-to-end testing from start to finish or whatever the process is. It has to be as comprehensive as Oracle Cerner working with VA can make it, and it is that comprehensive nature of the test where attention has to be paid so all features are tested in it.

Ms. CHERFILUS-McCORMICK. During our last hearing in May, Dr. Ellzy indicated that Oracle had already fixed the issue going forward, but that Oracle was still working with VA to do the retroactive work that needs to be done for things that were already transmitted. We heard last week that the Pharmacy Council finally gave up on expecting Oracle to fix the corrupted data in November, 7 months after the issue was identified, because most of those prescriptions will be expiring by April of this year.

Are you concerned about the message that this sends to VA providers that serious high-risk issues are not going to be resolved in a timely manner?

Mr. CASE. We are always concerned about the fact that providers must be clearly informed of what is happening, and the risks, and what they should be doing to mitigate against those risks. Yes, we are concerned. The fact that it was allowed to stay in place, and up until April 7, that data is still in there.

Ms. CHERFILUS-McCORMICK. Mr. Sicilia, we were told that part why this data was not fixed is because it would have been costly. Do you think that the VA should be expected to pay to fix things that Oracle broke?

Mr. SICILIA. I am not sure that we broke anything here. This is a very complex process, and it is a byproduct of having multiple systems involved, multiple versions of Vista, multiple EHRs, and lots of interfaces in between.

We are, of course, responsible and have taken responsibility for fixing all defects in the system as designed, as scoped, and on contract at our cost and have done so. I do not believe that extraordinary circumstances for system interfaces that we do not have direct control over are necessarily things that we are billing the government for that we should not be, that are not part of the scope of the existing system. I am very confident that we have main-

tained all of our warranties and fixed things that we are responsible for fix at no cost to the government.

Ms. CHERFILUS-McCORMICK. Are you saying that who should bear this cost?

Mr. SICILIA. I do not have all of the details on this particular issue since it goes back a very long time and we have been making lots of fixes to the system. I am happy to respond in writing with the details on this one.

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

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

I now recognize Representative Self for 5 minutes of questioning.

Mr. SELF. Thank you, Mr. Chairman.

Dr. Evans, a question for you. I think we try to take human error out of everything. I am not sure it has been taken out in this case. How many veterans have actually been harmed, do you have any idea, from these drug interactions?

The reason I ask is because I have seen returning veterans come into the civilian community taking 20 pills a day, 25 pills a day. That seems to me, I do not even know, you would probably need a supercomputer to figure out the interactions for that. Do you have any idea how many veterans have been harmed by this issue we are discussing?

Dr. EVANS. We have not found an instance of harm, though we are vigilant and looking and interested, if—we will look to find one, if we can. We have not found an instance of harm specifically related to the drug-drug interaction issue from this HDR challenge.

Mr. SELF. Okay. The next question is you are going to roll out Lovell when? The Federal Health Center, when?

Dr. EVANS. Scheduled to go live is March 9.

Mr. SELF. March the 9th. That is a couple of weeks from now. Why in heaven's name are you going to roll out a more complex system, which is not only VistA, which is not only EHR, but it also includes DOD? Is that not more complex? We are trying to fix the complexity just in the VA.

Dr. EVANS. As you alluded, the medical center at the James A. Lovell Federal Health Care Center is a unique medical center. It is a fully joint DOD and VA facility. There are deep interdependencies there between the DOD healthcare system and the VA healthcare system.

One of the advantages that we anticipate in going live at the James A. Lovell is that we have a partner in DOD who has been able to successfully deploy the record across the rest of their enterprise healthcare system.

I would say a couple reasons that I feel confident about moving forward. Number one, part of the goal of the reset, one of the three primary goals of the reset was to put our focus on FHCC. We have not had other—we have been working to improve the system and do the enterprise work that we need to be able to successfully move forward with this program. We have also been able to put a significant amount of attention on FHCC, and we will benefit from the DOD's experience in support of all of our users there.

Mr. SELF. Is their system exactly the same one that Oracle is doing for you?

Dr. EVANS. The DOD system?

Mr. SELF. Yes.

Dr. EVANS. It is the same system, yes. There are some differences in workflows. For example, at the James A. Lovell Federal Health Care Center, nearly 40,000 Naval recruits come through every year. Some of the healthcare they receive on what is referred to as the "east campus" is a little bit different in preparing Naval recruits.

The software system that will support clinicians, whether those be VA or DOD clinicians, is the same.

Mr. SELF. Well, then all of these patches that Oracle has been doing have been done in the DOD system?

Dr. EVANS. Yes.

Mr. SELF. I mean, because if they are doing this for you, why is it not—if they have already done it for DOD, why is it not the same? You said the systems are basically the same. Why are we having this problem in VA?

Dr. EVANS. The fixes and improvements that are delivered. We heard referenced earlier, the Block 10 upgrade.

Mr. SELF. Right.

Dr. EVANS. Our block upgrades occur every 6 months. They are major software uplifts.

Mr. SELF. These are already into DOD?

Dr. EVANS. They are.

Mr. SELF. They work in DOD. Why do they not work in VA?

Dr. EVANS. Well, which specific ones? I mean, for example, in the Block 10, all of the upgrades that we put through in Block 10 are to the benefit of both VA and DOD. There are some that are specific to maybe a connected set of technologies that we own in VA that connects to the electronic health record, that DOD has a different set of technologies, so there is some difference, but the core system is the same.

Mr. SELF. Okay. For Mr. Case, I want to get into the displaced appointment queue. Why are they falling through the cracks, the appointment system? Why?

Mr. CASE. Right. We do not have a root cause for the displaced appointment queue not capturing every displaced appointment, which is simply shorthand for a provider who has to cancel a set of appointments and they have to be rescheduled. We know that there is been workarounds put in place. Schedulers are supposed to take actions now, and the displaced appointment queue has been described to the providers and us as a safety net. Well, it is not a very effective safety net if not all canceled appointments are going there or they disappear once they are there.

We understand that VA has fixes that they are going to put into place to address the displaced appointment queue. As it exists right now, it is still there and is not an effective safety net.

Mr. SELF. The software cannot handle it and the human error is introduced?

Mr. CASE. Right. Because of the software not being comprehensively accurate, workarounds always introduce the possibility of human error. That is correct, sir.

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

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

Dr. Emmendorfer, we just listened to Dr. Evans say that there is nothing to see here. Everything is going to be fine. We have got all the fixes in. Seems to think that the folks at James Lovell are going to be A-OK we roll this thing out in March. It is a much larger, much more complex facility.

What is your feedback from James A. Lovell and the folks there that are going to have to implement this system? What kind of feedback are you getting?

Dr. EMMENDORFER. Yes. Thank you, Congressman, for the question.

In VA Pharmacy, as Dr. Evans testified to, we really have a culture of safety and quality and continuous process improvement, and not only from our Lovell sites, but from our other Oracle health sites. They have done an amazing job of providing the feedback, identifying the manual workarounds that are needed and what is needed to improve the efficiency of the system.

One of the major enhancements that we need is the bidirectional data synchronization, the one that we have heard that has been deployed but not enabled. The VA Pharmacy community, this has been their highest ranked feature that they want to see be put in place in the Oracle health system.

Mr. ROSENDALE. How long has that request been out there to try and get this resolved?

Dr. EMMENDORFER. I am going to ask Dr. Silverman or Dr. Evans for the exact date.

Dr. SILVERMAN. Good morning, Congressman Rosendale.

Mr. ROSENDALE. Good morning.

Dr. SILVERMAN. The request for the synchronization, which has been referred to now as enhancements 3B and 3C, was initially targeted for Block 8, would have been February 23, was not ready at that time. As you have heard—

Mr. ROSENDALE. February 2023?

Dr. SILVERMAN. Yes, sir.

Mr. ROSENDALE. Okay, thank you. That is all. Thank you very much.

Dr. Silverman, according to Mr. Case's testimony, this is on page 4, the VHA Pharmacy Council that you chair withdrew a request for Oracle to correct the medication data in the health data repository. That predated the April 2023 software update. The errors go all the way back to October 2020, when Spokane went live with Cerner. This decision was based on the expectation that all the prescriptions would expire by April 2024 and the inaccurate data would eventually fall out of the veterans records, which is what I had referred to in my opening statement.

Dr. Silverman, were you a party to this decision, and did you make this decision?

Dr. SILVERMAN. I was part of the Council's recommendation for that decision, yes. The options for correcting the existing data included, when we began evaluating it in April 2023, a process to re-send data from the Millennium Health Record to the HDR or for HDR to correct the data. Neither of those processes existed or exist. If you take estimates that it would have been about a 6-month soft-

ware delivery by the time we reached November, if that software project had been started, it would have been cost, expense, and attention taken away from other efforts, such as the ones we are talking about with data—

Mr. ROSENDALE. Again, Dr. Silverman, what we are talking about is time and money, Okay? The taxpayers are continuously providing both of those. The veterans are the ones that are at risk for all of this. This very time and money that the taxpayers are absorbing the burden of, Oracle continues to get the benefit for producing a product that is simply not delivering as promised or close to it.

Because of this decision your Council made, there are still holes today in the medication records of veterans all over the country that feed into automated safety checks. Unless every single one of those veterans' healthcare providers have received and understood the warning and exercised vigilance every day, those veterans are being put at risk.

Dr. Silverman, do you regret this decision? How will you direct Oracle to immediately correct the remaining errors?

Dr. SILVERMAN. Thank you for the follow up on that. The decision to withdraw a request for a software change was accompanied by actions that have been taken. Those actions include a weekly task being operated by VA's HDR team to inactivate the older records that are in the HDR, removing all of them from the order checks, leaving the portion described up through April 2024 to be addressed.

Mr. ROSENDALE. These are the exact holes that I was just referencing. Thank you very much.

I will now recognize Representative Cherfilus-McCormick.

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

This question is for Dr. Emmendorfer. In our last hearing on the pharmacy issue, you indicated that it took three times as long to process a prescription filled in Cerner as it does in VistA. Have you seen any improvements in that time? Does it still take three times as long?

Dr. EMMENDORFER. Thank you, Congresswoman. Yes, it still is taking approximately three times as long for our VA Oracle health sites to process prescriptions.

Ms. CHERFILUS-McCORMICK. Do you expect the upgrades in Block 10 are going to make a major impact or improvement?

Dr. EMMENDORFER. We are going to have to wait for more time to go by so we can evaluate. The data synchronization piece is one that we will be paying close attention to, because that is a scenario where our pharmacists now need to do dual entry, basically in the Medication Manager Retail (MMR) and the provider application to keep the data in sync.

Ms. CHERFILUS-McCORMICK. Given most of your mitigations for known pharmacy issues calls on more labor-intensive manual workarounds, which require great vigilance by staff, what are you doing to attract and retain pharmacy staff?

Dr. EMMENDORFER. Yes, so, you know, our pharmacy workforce, I just want to take this opportunity because we have a very highly trained, professionally trained workforce. Really we are leading the industry and the profession. We have just under 12,000 phar-

macists in our system, right around 6,000 pharmacy technicians. In our residency program we have around 660 pharmacy residents every year that go through our training, and we are able to retain about 90 percent of them. They go on to become VA pharmacists.

We are really operating at the top of our license inside of VA. I believe that helps us attract top quality pharmacists into our healthcare system.

Ms. CHERFILUS-McCORMICK. How are you coordinating with VHA to make sure you can add so many pharmacist staff at the next deployment sites?

Dr. EMMENDORFER. Before this hearing, just, was it last week or the week before, I was out at Lovell and spent time actually sitting through some of the training sessions to see how those worked as well and spending time with our pharmacy staff. And so really VA's journey to a high reliability organization, I saw very good communication between our pharmacy leadership and the facility leadership. This is a very big undertaking, and there is a realization of everyone involved at Lovell that additional pharmacy staff will be needed.

Ms. CHERFILUS-McCORMICK. How long do you expect to need large pharmacy staffing?

Dr. EMMENDORFER. I do not have a good answer to that question, just to be honest. That, I think, is part of our reset process is through our reset process, being able to listen to our end users obtain their feedback.

For the testing of the 3B, 3C that has been referenced, for example, it is been really important that in our Pharmacy Council. We are also including field representatives into that testing. Making some of those changes, but time will tell.

Ms. CHERFILUS-McCORMICK. My next question is for Mr. Sicilia. Does it make sense to you that Modern Solution takes three times longer to use than the predecessor, even with additional or new safeguards?

Mr. SICILIA. No, it certainly does not make sense and it is not the aspirational goal program, nor should it be. As the doctor said, we look forward to the go live at Lovell, and I think at that point, we will—Lovell will be the first site to go live with all of the new enhancements that we put into the system since we acquired Cerner in the last 18 months. I think that will be a very good baseline and the feedback that we should get, and that feedback should come very quickly from Pharmacy in all aspects to get to a much better process.

Ms. CHERFILUS-McCORMICK. In your testimony, you indicated that productivity in Oracle cannot be compared to productivity in VistA because the new EHR included additional safeguards that ensure patient safety and improved health outcomes for veterans. Given the topic of today's hearing, does that assertion ring hollow?

Mr. SICILIA. I am sorry, I missed the last point.

Ms. CHERFILUS-McCORMICK. Does that assertion ring hollow?

Mr. SICILIA. No, I do not believe it does. Look, I do not think that—there are different processes between the systems. Certainly we are not here to say that it should take three times as long. That is obviously not what we are saying.

I am not a pharmacist, I am not a patient safety expert. What should the baseline be and how do those protocols impact staffing? That is why we continue to work together with VA and with the Pharmacy Councils to determine the best practice.

Again, I do believe Lovell is the best baseline that we will have given that this will not be incremental fixes to existing go live sites. This will be a brand new go live, where all of the features will be recognized and consumed at once.

Ms. CHERFILUS-McCORMICK. Thank you. I yield back.

Mr. ROSENDALE. Thank you. This question is for all the VA witnesses. OIG's testimony also explains how in June 2023, the VHA got a clinical episode review team together and it recommended notifying all the potentially impacted veterans. They recommended notifying all the impacted veterans. This went all the way up to Undersecretary for Health Dr. Elnahal.

On August 7, the team sent a communications plan throughout the whole VHA organization, including the Veterans Integrated Services Networks (VISN)s that include the facilities using the Oracle Cerner EHR. No one at VA ever sent the notification to any of the veterans.

Dr. Evans, Dr. Emmendorfer, Dr. Silverman, how do you explain this? How do you explain this? Do you commit to notifying the veterans as soon as possible when you leave this hearing room today so that they are aware that they may be exposed to some kind of safety and health problem, potentially because of interactions?

Dr. EVANS. I will start with the second part of your question. We agree wholeheartedly with both you and with the IG that it is important that veterans are full participants in their healthcare. They are the most important part of the healthcare team. Informing them and making sure that we are optimizing the care that is delivered in the exam room when our VA healthcare providers are sitting with veterans, writing prescriptions, making sure that we are optimizing the awareness of those folks about how to deliver the best and highest quality safe care is very important. We agree.

We are working on communication and will communicate with the affected veterans around, frankly, many of the actions that can enhance the care delivery in the context of this EHR transformation. One of the recommendations—

Mr. ROSENDALE. Dr. Evans, this is not a really complex question.

Dr. EVANS. Yes.

Mr. ROSENDALE. Okay. It is really not. All of these words that you are filling the air with right now, all I want to hear is that Mr. Case says that there is 250,000 veterans that very well may have problems with drug interactions. Very well. I cannot think of another business or industry that would be allowed to perpetuate such an issue without disclosing it to their customers that there could be a problem. I am asking, can I get the commitment?

Look, I have worked with Dr. Elnahal very closely, and he has been so, so very responsive to everything that I have asked him to do when it comes to patient care. He really has. I need the three of you to tell me that we are going to—

Dr. EVANS. Yes.

Mr. ROSENDALE [continuing]. make sure that we get this information out to these exposed veterans, 250,000.

Mr. Case, we do not even know what the number is potentially right now.

Dr. EVANS. Mr. Rosendale, so I did use too many words. I will make it a little bit simpler. Yes.

Mr. ROSENDALE. Thank you. Dr. Emmendorfer, Dr. Silverman, can we all work together to make sure that we get this disclosure sent out to these exposed veterans?

Dr. EMMENDORFER. Yes.

Mr. ROSENDALE. According to OIG, you notified the VA staff to be alert to the danger, but you did not notify the veterans. How can you possibly, possibly justify this when you are telling me that you are focused on making sure that we have the best care delivered to our veterans?

Dr. EVANS. First, I think with regard to how can we justify—can you repeat the question for me?

Mr. ROSENDALE. How can you justify not notifying the veterans of these possible drug interaction problems after you notified the VA staff you have been notified? How is it that you can justify not notifying the veterans of this information?

Dr. EVANS. Yes, I would—well, so I think most important, in my mind, the most important part is notifying the staff. When I am in clinic at the D.C. VA seeing patients, I am aware of—and by the way, there is a clinical reminder in the electronic health record and Computerized Patient Record System (CPRS) Vista for me that would warn me if a patient has received care at one of our new sites—and so the most important person to be aware is the prescribing provider, because it is the prescribing provider who is going to have to take the action to make sure that they are verifying the medication list and that they are then making sure that there are no drug-drug interactions for that particular patient.

I agree, as I just said, that notifying the patients is important and is something we will do. It is also very important that the providers are aware of the need for the extra vigilance in this circumstance.

Mr. ROSENDALE. Representative Cherfilus-McCormick, I yield back. You are welcome for your next 5 minutes questioning.

Ms. CHERFILUS-McCORMICK. Thank you so much, Mr. Chairman.

Dr. Evans, of the 79 business requirements originally identified, how many did VA adjudicate as warranting change requests?

Dr. EVANS. Of the 79. We started with, as I mentioned in my opening statement, we started with the highest priority, early changes that were necessary. There are further change requests that are in process for delivery, and we will be working through all 79 items and, frankly, new items that we discover that are needed for improvement.

Ms. CHERFILUS-McCORMICK. Do you have a specific number of how many have been completed and how many are still awaiting action?

Dr. EVANS. I would have to take that for the record, unless Dr. Silverman—

Ms. CHERFILUS-McCORMICK. Would you know how many business requirements or solutions in this weekend's Block 10 upgrade?

Dr. EVANS. In this weekend's Block 10 upgrade, there were three major improvements. There were also some minor fixes as part of the platform upgrades, but three major improvements.

Ms. CHERFILUS-McCORMICK. How are you measuring improvements driven by Block 10 and what is the specific criteria? Is employee satisfaction a part of that criteria?

Dr. EVANS. For Block 10, yes, absolutely. Employee satisfaction is part of that criteria. I think we have spoken at prior hearings about the Kent Gale, Leonard Black, Adam Gale, and Scott Holbrook (KLAS) survey, which is a user satisfaction or user confidence survey that we were doing once yearly. We have committed to surveying our users of the Federal EHR more frequently, and the next survey is being timed specifically to make sure that we are delivering that survey after Block 10 so we can assess in a robust way the satisfaction of our end users for the Block 10 improvements.

Ms. CHERFILUS-McCORMICK. What is your timeline for these measures?

Dr. EVANS. For the user satisfaction survey I can certainly get you the official timeline. I think we were going to wait at least a month after Block 10 to make sure that folks had had the full experience with Block 10 before they were asked to comment on their satisfaction with it.

Ms. CHERFILUS-McCORMICK. Mr. Case, the OIG has been watching this program closely from the beginning. Have your people observed any improvements in the program management? What are their biggest issues that the VA needs to address to improve its management of this program?

Mr. CASE. Yes, we have seen an improvement in the sense that the senior leadership, some of which is right here, we find to be receptive to issues that arise, either from us or other areas, and are committed to resolving them. Think that going forward, there needs to be enhanced project management to get VA through the reset and out of the reset, including accurate measurements as to whether the reset is successful and achieved its goals. Then once that is done, the real work of project management occurs in large scale to try to assess how to go forward once you are out of the reset.

Ms. CHERFILUS-McCORMICK. Repeatedly, OIG and others have found that the scheduling and pharmacy staff in particular have found themselves overwhelmed when using the system. In part, this appears to be due to insufficient or inadequate training focused on day-to-day usage of the system. VA has modified training plans previously, but it is clear that these efforts need to be stepped up. How did you train staff differently at Lovell, and how are you measuring training success?

Mr. CASE. If that question is for me, I am not implementing the training program at Lovell. I understand they will be measuring the success of that program.

Ms. CHERFILUS-McCORMICK. That was for Dr. Evans.

Dr. EVANS. Okay, I thought so. Yes, first of all, at Lovell, we have introduced several new—we have changed training. You know, as you mentioned, right, it is important through training to learn how the software works. What we have heard consistently

from our end users is that understanding how the software works is not sufficient. It is really to deeply understand how the software will work in their day-to-day work. Understanding how can I configure this software for optimal use, saving favorites to make things more efficient for me when I am seeing a patient in my type of clinical medicine, what are the best practices?

In support of that, we have added some new, I will call them adoption activities at FHCC. I think sometimes when we think about training, that is oftentimes an online training class or sitting with an instructor in a classroom. Most of us as learners, we learn—yes, we learn in a classroom. Yes, we learn online, but we really learn by doing and trying. One of the new events that we have gotten great feedback from at the FHCC site is what we call our learning labs, where we allow users to really practice their full work in our sandbox environment.

We also are going to be able to bring even more what we call pay it forward peer support at the time of go live to improve our ability to sort of stand at the side of each of our end users in helping them adopt a new solution.

Ms. CHERFILUS-McCORMICK. I yield back. Thank you.

Mr. ROSENDALE. Thank you very much, Representative.

Pay it forward. Pay it forward? Is that what you just said? We have been paying this forward for 5 years now to the tune of \$9 billion. Nine billion dollars. Quite frankly, Dr. Evans, I find it disingenuous to blame this on training when the users—okay, you are saying they have to be more comfortable with the software. It is disingenuous to try and blame this on training and the users when they cannot even rely upon the data and the information that they are receiving from this software program.

I will—Representative McMorris-Rodgers, are you ready or do you want me to give you a dive in? Thank you so much for joining us.

I now recognize Representative McMorris-Rodgers for 5 minutes questioning. Thank you.

Ms. McMORRIS-RODGERS. Thank you, Chairman Rosendale. I really appreciate you hosting this important hearing today and giving me the opportunity to address this committee.

The Oracle Cerner electronic healthcare system has been a disaster for the veterans it was designed to serve. We are familiar with the devastating problems the EHR has created for veterans, especially in eastern Washington, where it was first launched. Problems were clear from the beginning. Prescription orders and referrals disappearing into unknown queries, long outages making the system useless, dropped appointments and other errors directly harming nearly 150 veterans. Things have gotten so bad that some veterans have been told to work around the system altogether, to call their local pharmacy rather than use the EHR to do something as basic as filling a prescription. It is hard to fathom that the system was so broken that our VA pharmacies cannot serve their sole purpose. That is exactly what happened, and our veterans are paying the price, accumulating hundreds and sometimes thousands of dollars in debt after being forced to pay out of pocket for treatment.

At Mann-Grandstaff, pharmacy employees continue to work under extreme pressure, relying on memory to recognize dangerous

drug combinations and other problems the system is failing to catch. Burnout and low morale have become the new normal, adding pharmacists to the list of providers and support staff that simply cannot take it anymore. Their leaving is making bad staff shortages worse, creating longer wait times, and making it more difficult for veterans to get the care that they need. It is unsustainable, and the EHR is to blame.

Let me be clear. The time for inaction is over. We owe it to our Nation's heroes to get this right. I believe that starts with pulling the plug on this deeply broken system and going back to one that works. That is the only way to restore broken trust and help our veterans who have nowhere else to turn.

Our witnesses here today will play a vital role in achieving that goal. I would like to ask a few questions.

Dr. Emmendorfer, you represent the pharmacist, and they have reached out. They have really reached a breaking point in Spokane and other medical centers that are using the Oracle Cerner EHR. I would like to ask, what are they telling you?

Dr. EMMENDORFER. Yes, this last September, we had a pharmacy leadership meeting. During this reset period, Congresswoman, one of the things we are trying to do is just ensure that we are hearing the voice of our end users and of our pharmacists. Our chief of pharmacies is from there, and Sonny, who is our chief in Spokane, it is really because of his leadership that he has—it requires more staff. It takes three times as long to process prescriptions in the Oracle health system, and it is really their dedication to the mission of caring for the veterans to ensure that we are still able to get the prescriptions to the veterans that they need. It does require more staff.

There are manual workarounds that the staff do have to use, like you referenced. We are aware of those. During this reset period, it is important that we get as many of those issues addressed for our pharmacy staff.

Ms. MCMORRIS-RODGERS. Thank you for that. I guess from your perspective, what needs to happen with the pharmacy software in order to avoid a breaking point?

Dr. EMMENDORFER. Yes. Earlier we were talking, and VA Pharmacy has this culture of quality and safety and continuous process improvement, and those will continue to be our traits in VA pharmacy. First of all, it is our healthcare providers delivering the care that provides that high quality and the electronic health record, regardless of what it is, needs to support that delivery of care. On that journey, one of the things that we do also need to do is get back closer to a baseline productivity.

Ms. MCMORRIS-RODGERS. Okay. Mr. Sicilia, the men and women who work in our VA pharmacies are at the end of their rope, and I would like to read to you what one of the pharmacists in my district had to say about the Oracle Cerner system.

"I cannot do this anymore, the stress of this system, added workload to make it function. I cannot care for my patients and have stopped being able to care for my own well being."

What am I supposed to say to someone who has been destroyed by the system?

Mr. SICILIA. Well, I certainly acknowledge that there have been issues in the pharmacy system and in the system in general. Since we took ownership of this contract, I do believe that we have made improvements, and I will speak in two phases there.

The first is the system, as you mentioned, when we took it over, was unstable, was unacceptable. There were five Service Level Agreements (SLA)s. We signed up for 23 in the new contract, and we have largely met them and paid financial penalties when we did not meet them, and we will continue to do so in the future.

Pharmacy has been—in the Federal enclave, the one thing that is different between the VA and all the other tenants is pharmacy. It is a unique process, and it has been the most difficult and the most challenging to get it right. I do believe with what we are about to roll out at the Captain James A. Lovell Federal Health Center in north Chicago, we will see the benefits of all of the focus that we had to improving pharmacy.

I still do not believe, and I am not here to say that that equals success and that equals a baseline or a productivity goal, that we want to say that is all we can do, and we will move on. I do believe, though, that the move toward standards, the move toward better testing and better, you know, better reliability, will yield better results for pharmacists. I think the evidence of that is in a function for pharmacy, the 3B, 3C, that we did not roll out this week, not that we did. Even though it was scheduled to be rolled out. We did not roll it out because it did not pass all of the safety protocol tests. That is a difference between what may have happened in the past versus now.

Now, it has been fixed and it has been addressed, and now it is in testing, but we caught it. We caught it. That is, I think, a big difference between the way program used to work and is working now. I do believe that there are better protocols and better functional testing in place to make sure that we do not make pharmacists lives more difficult.

Ms. MCMORRIS-RODGERS. Okay, I appreciate that. However, the veterans in eastern Washington feel like they have been left behind in the midst of all of this. This health record was—the first new record was rolled out in October 2020, and I have yet to hear the plan for how we are going to make it work and make sure that our veterans get the care that they need.

With that, I yield back.

Mr. ROSENDALE. Thank you very much. Forgive me if I do not celebrate because we should commend you for not rolling out yet another failed update.

Representative Schneider, I recognize you for 5 minutes of questioning.

Mr. SCHNEIDER. Thank you. First, I am grateful for you allowing me to be a part of this hearing. I represent the 10th District of Illinois. Lovell Health Care Center is not just in my district, it is central to my district. It is critical to the veterans in the 10th District of Illinois as well around the region.

I will start with you, Dr. Evans. I am not sure of the right one, but Lovell is—we are the first, and so far the only, joint DOD-VA hospital which makes the March 9 rollout a little bit interesting because it is the first time we are trying to do it over this bridge. Can

you talk about what steps have been taken to make sure that it is going to be rolled out effectively without a discontinuity or breakdown?

Dr. EVANS. Sure, I would be happy to.

First of all, I have had the privilege of traveling relatively frequently to North Chicago, Illinois, and to the James A. Lovell Federal Health Care Center, and I have to say that it is a really special facility.

Mr. SCHNEIDER. I agree.

Dr. EVANS. It's mission is really compelling. On top of that, the staff at the James A. Lovell Federal Health Care Center are committed to delivering outstanding care to service members, beneficiaries, veterans. It is the one VA medical center you go to with a pediatrics clinic. It is a pretty interesting place.

Mr. SCHNEIDER. It is a special place.

Dr. EVANS. Because of that, we have needed a significant level of focus on FHCC, including some of the complexities that you are well aware of that are introduced by trying to run a joint DOD-VA facility.

There are a lot of eyes on James A. Lovell from the Federal Electronic Health Record Modernization Office, which is leading the deployment, to the two program offices in both DOD and VA, who are really putting a tremendous amount of resources, to Oracle Health and the Leidos partnership for Defense Health, as well as the Defense Health Administration, VHA. When it comes down to it, we are all there to support the staff on the ground at FHCC.

Success at FHCC is our commitment to those 3,200 staff who come to work every day to care for those who are served by that facility. That has really been where we have anchored our attention.

Mr. SCHNEIDER. Thank you. Let me turn to Mr. Sicilia.

Listening to the testimony here, I am getting, I guess, the technological equivalent of Post-Traumatic Stress Disorder (PTSD). Forty years ago, I worked in systems development. It was not the team I worked on, but one of our office practices in New Jersey installed a new system to the Department of Motor Vehicle (DMV). When it went live, there was a 4-second delay between every keystroke. It worked well in testing; it did not work well in implementation.

You have talked about some of the challenges of a system that you acquired, inherited, and trying to make those fixes. There are fixes that are dealing with efficiency, and we have heard some of that today, the concerns about efficiency and just making the job better. There are concerns that relate to patient safety.

One of the things that impressed me in Dr. Evan's testimony is the idea that the pharmacists are an integrated part of the care team. I think that is something that we owe all of our veterans, is the best and not just the most professional care, but the safe care that delivers on their needs.

What confidence, as we go to this live rollout in Lovell next month, can you give us that we are going to support the teams on the ground? They are going to be able to continue to deliver the level of care they historically have, if not improved, and that the

bugs that have been harming the care of the system in the past will not be there in the next round.

Mr. SICILIA. Sure. I think your characterization is correct. There are two buckets: there is system reliability and availability and then usability, being able to use the system.

As you mentioned, when we acquired the system, it was not reliable. It was not at a functional level that I think we could warrant that it was an acceptable experience for end users. We have largely addressed those system reliability issues, those issues that sort of keep the plane in the air. I mean, if you cannot do that, then the rest of it really is not going to function well.

Now we have turned, as Dr. Evans said, our full attention during the reset period to making Lovell the best rollout and the best experience that it could be. I do believe that Lovell will benefit from all of the learnings we have had in both of those buckets, both the system reliability standpoint, the networking standpoint, things like printing, and all those things which are very important inside a system, as well as the functional enhancements. There are lots of functional enhancements that have also been made beyond pharmacy, over and above pharmacy, that Lovell will be the first site to absorb everything at once. Well, they will get the best of the new system at one time.

The other five live sites have had to take these functional enhancements of piecemeal because they were already live and they were already, you know, functioning on a system that, admittedly, when we took it over, was not stable and was not acceptable. I think their experience has been very different than the experience that Lovell will have as a result.

Mr. SCHNEIDER. Well, thank you. We will be watching. We are counting on it. Sticking with your airplane analogy, it is not just getting the flight airborne, it is getting us to our destination safely, but it helps to be on time and without bumps and bruises.

With that, I yield back.

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

Dr. Evans, the big ticket item in last weekend's software update was supposed to involve automated coordination of prescription information between PowerChart and MMR, but you postponed it because it had too many errors in testing. What were the testing errors? What problems would they have caused? When do these errors have to be corrected in order to avoid causing problems at Lovell?

What were the problems? What issues would it have caused for our veterans? How can we make sure that we do not have this problem—introduce a virus at Lovell?

Dr. EVANS. Right. Let me just describe quickly what the capability was to do. When a physician or a licensed independent provider writes a prescription, that prescription is then sent to the pharmacist, who is going to process that in a different application called Med Manager Retail. That pharmacist, as part of the normal practice of pharmacy, is going to adjust that prescription if there is a need to adjust it. Maybe a certain strength of the tablet is not in stock at the pharmacy and so instead of issuing a 20-milligram pill, we have to issue two 10-milligram pills. Maybe the provider

spelled something wrong and the pharmacist is a better speller and can correct that on behalf of the pharmacist. The pharmacist will adjust the prescription. That information then should be in a normal—in a commercial healthcare system, the pharmacist may fix that at a commercial pharmacy, and it does not synchronize back to the electronic health record that the provider is using.

In the VA, our expectation is that those changes the pharmacist made are now visible to the provider, so that the provider knows exactly what the patient was given and so that when the provider, a year later, renews that prescription again, they are now renewing the appropriate prescription, which means the pharmacist does not have to redo the work of fixing the prescription that would have been renewed if it was the erroneous initial one.

That is what the software is supposed to do. It worked for all of the normal circumstances. A single pill that was two pills, correcting the spelling mistake. There were some places in testing where a nontraditional insulin regimen or an inhaler, where the strength of the inhaler was a unique strength of the inhaler, you know it was not—most of the cases, well over 95 percent of the cases, I do not know the exact number, but it was a high percentage, were just working fine. There were these subcases where we recognized we needed to address those issues.

Our expectation is that it will be delivered as, Mr.—

Mr. ROSENDALE. This small number of cases, is this 250,000 that we are talking about?

Dr. EVANS. No. Entirely separate issue.

Mr. ROSENDALE. Okay.

Dr. EVANS. Entirely separate issue. Our expectation is the fix has been put into testing. It is now being tested as of today, and our expectation is that we will deliver prior to the FHCC go live.

Mr. ROSENDALE. Dr. Evans, this is closely related to the update that Oracle launched and then you quickly turned off last April. Why has this particular issue been so difficult to resolve?

Dr. EVANS. I think in part because of, you know, we are dealing with—this is one consolidated set of technologies, but ultimately two different information systems that we are asking to coordinate with each other. There are some technical complexities there.

Also, some work to identify what the—I mean, the issue before was that we realized that there was one field that was not synchronizing, that needed to be better synchronized.

I will let Dr. Silverman can probably comment to that more accurately.

Dr. SILVERMAN. Thank you, Dr. Evans.

Chairman Rosendale, as you have asked during this hearing, the initial plan on enhancement 3B was scheduled for Block 8, February 2023. Oracle Health identified an issue and made the decision not to deploy there and moved it to that April cube in 2023, which was right before our previous hearing.

Mr. ROSENDALE. Why is this particular issue being so hard to address?

Dr. SILVERMAN. I do not know that I know the answer to that, other than when the Oracle—

Mr. ROSENDALE. Okay, if you do not know, that is fine.

Dr. Emmendorfer, for the five medical centers using the Oracle Cerner EHR have had to increase their staffing by at least 20 percent, we have been discussing that, manage all workarounds. I understand that your office estimates that a large, complex medical center would have to increase its pharmacy staffing by as much as 60 percent. Give me a rough estimate of how many staff have been added so far and how much this costs annually, if you could.

Dr. EMMENDORFER. Yes. Right now at our smaller sites, the complexity, 2 and 3. On average, it has been about a 20 percent increase in staffing. I do not have the exact Full-time Equivalent (FTE), the staff numbers, but that would equate to as far as cost. I do not have an exact number, but it would add millions to our staff and to our salaries.

Mr. ROSENDALE. Okay. Thank you so much.

I defer—to I yield back. And—

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

I wanted to go back to our questioning on education and training. My question is going back to Dr. Evans, where we left off. How are veterans and caregivers being educated on mitigating the issues the OIG identified with inadequate medications and allergy checks at legacy sites?

Dr. EVANS. First, I think it is important in Joint Legacy Viewer (JLV), which is the application where most—well, it is the application where VA providers would go to look to see a consolidated medication list, that is, medications that were prescribed at the facility where they are seeing patients, as well as medications at any other VA facility, as well as medications prescribed by the DOD, including in the Federal EHR, which is in use at the five sites that we have mentioned. In JLV the medication list is an accurate medication list.

Also—so the first thing is that it is important we emphasize with all patients in any of our visits the importance of what we call medication reconciliation. This is an important part of healthcare in general. It is making sure that we have an accurate medication list. Is the veteran taking any medications that we do not even know about in the VA because they were prescribed by a commercial provider and fulfilled at a commercial pharmacy? It is through that process of medication reconciliation that then that foundational medication list can serve as the guide for now, as I am going to prescribe or add a new medication to that list or change a medication, that I understand whether there is any interactions there.

The primary thing that we have been emphasizing with patients is the importance of bring your medications to your visit, make sure that we are spending—together we spend the time getting an accurate assessment of what you are taking, including over-the-counter medications, herbal medications, supplements, et cetera.

Ms. CHERFILUS-McCORMICK. That medication reconciliation, that is part of normal healthcare practices throughout the industry.

Dr. EVANS. Yes.

Ms. CHERFILUS-McCORMICK. Now with this increased level of inaccuracy, are you taking any other steps, further steps to make sure that they are aware caregivers and the veterans are aware of, or are you still doing the regular medication?

Dr. EVANS. Yes, I think what I was trying to get at is medication, to your point, medication reconciliation is fundamental to good health care. As Mr. Rosendale asked, are we going to notify veterans and communicate with veterans?

Ms. CHERFILUS-McCORMICK. Yes, precisely.

Dr. EVANS. We responded to that in the affirmative.

Ms. CHERFILUS-McCORMICK. Are there any extra steps you are taking? That is what I am really asking in line with these inaccuracies.

Dr. EVANS. Right. The issue for the subset of individuals, which is an increasingly shrinking number of individuals who might have this challenge where the automated drug-drug interaction checking is potentially inaccurate, or it could be inaccurate. There are other ways for a provider to be able to check for drug-drug interactions.

As an example, in clinic, whenever I am concerned, we have a national contract with a web-based solution that can help providers get access to trusted clinical information, and it has a very, very good drug-drug interaction checker in it. I enter the medicines that the patient is receiving in that drug-drug interaction checker and actually get, frankly, more valuable information from that on the specific interactions when I am making those decisions.

Providers having to do that manual step, actually, frankly, many providers would do that anyway.

Ms. CHERFILUS-McCORMICK. That is not a required manual step, correct?

Dr. EVANS. That is correct.

Ms. CHERFILUS-McCORMICK. That is not a system that is in place, correct?

Dr. EVANS. That is what?

Ms. CHERFILUS-McCORMICK. It is not a system that is in place throughout the entire—

Dr. EVANS. There is a national contract for that drug-drug data base.

Ms. CHERFILUS-McCORMICK. Okay. My next question is, how are you ensuring legacy site providers and pharmacists know that these issues exist with respect to inaccurate, duplicative, or missing information?

Dr. EVANS. VA providers and pharmacists?

Ms. CHERFILUS-McCORMICK. Mm-hmm.

Dr. EVANS. A notification was sent to facilities about the issue. In addition, as I mentioned, some facilities have implemented what is called a clinical reminder to provide real-time clinical decision support to providers when they are prescribing medications.

Ms. CHERFILUS-McCORMICK. Dr. Evans, Oracle use of queues has come up again and again. Has VA done a evaluation of all the queues to identify any other issues?

Dr. EVANS. This is, I think, referring to the displaced appointment queue that was mentioned in the IG testimony. With regard to that specific issue, in December, the fix was entered into production to make sure that we can support the number of contact attempts that VHA policy dictates after certain no show appointments, particularly for mental health appointments.

As for management of queues, I think, you know, inherent in the delivery of healthcare and delivery of healthcare to large popu-

lations are making sure that we are managing the list of individuals who are waiting for any given service. Yes, we have spent a considerable amount of time making sure that we understand any queue that needs to be managed in support of veteran healthcare.

Ms. CHERFILUS-McCORMICK. Thank you so much for your testimony. I yield back.

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

Dr. Emmendorfer, I want to go back to the additional staffing that is going to be required by the pharmacists to accommodate this system. Right now, the total spend on pharmacists, my understanding is that it is \$2.7 billion. That is annually, correct, \$2.7 billion annually? If we have a 10 percent increase, a 10 percent increase in that spend, that is \$270 million. If we have a 20 percent increase in that spend, that is \$540 million. That is nearly half a billion dollars.

Dr. Emmendorfer, your office is developing a pharmacy staffing model for future medical centers to use to figure out how many positions they will need to add based on all this. This is based on an assumption, and I think it is an absolutely correct assumption, that the Oracle Cerner pharmacy software will continue posing these difficulties and the medical centers will need extra staffing for the foreseeable future. How does that staffing model work? Who is going to pay for all the extra pharmacy staff?

Dr. EMMENDORFER. Yes, I can speak to what we are doing with the staffing model because we do need to develop a resource. When our Oracle Health sites first went live, there was not enough data points to develop a reliable model. Maybe a month and a half ago or so, we convened a work group that includes representatives from every level in the enterprise, including staff that are using the Oracle Health system to help us try to define some of those parameters. Right now, because of the number of manual workarounds, the processes vary because of the manual workarounds, and we are still working on, and we still have a goal of trying to develop the model, but we do need to see some standardization to develop that staffing model.

Some of the areas that are kind of new inputs for our staffing model that we need to consider is there are multiple queues now in Oracle Health Cerner, and I do not have the—I think there is like five or so, and each of those queues could range anywhere from an extra 5 to 20 or 40 hours of different staff time per week. It is a process, and outpatient controlled substance for one step of that process, like an additional minute could occur.

Then with our controlled substance inventory system, that is something we need to maintain for Drug Enforcement Administration to have those counts. One of the manual workarounds that our staff has is that they have to stop the production while those manual—or while counts are done because of the way that the system decrements the inventory, so that causes a slowdown.

Once some of these things start stabilizing, we definitely have a goal of developing that resource and finalizing it for the future.

Mr. ROSENDALE. What we are talking about, though, just to make sure I understand completely, is not that it is a lack of training on the pharmacist behalf. It is the fact that the system itself

requires additional steps which we call workarounds. I hear you reference workarounds. Many times it is additional steps in order to get to the same place which is consuming this additional time and requiring all the extra work.

Dr. EMMENDORFER. Yes, we have a highly trained VA pharmacy workforce, so we know how to act and perform in the profession of pharmacy.

Mr. ROSENDALE. Thank you so much.

Mr. Case, I want to go back to one detail in your testimony. We did not recognize the enormity of this until your office briefed the committee staff. Previously, VHA staff were required to make four attempts to contact veterans for mental health appointments. This is very, very serious because we all hear about and want to reduce the number of veteran suicides that are taking place, the 22 per day, because the consequences of not getting this care can be so damaging. When the Oracle Cerner EHR was implemented, that was reduced to attempts because of the burden of documenting these calls or letters in the system.

Who made this decision, and how could an Information Technology (IT) system drive a policy decision that can have life or death consequences?

I have here in my hand the VA policy that says that, it is, let me see here, Directive 1232(1), and number 4 on page 2 says, "For mental health appointment the minimal scheduling effort for scheduling, rescheduling totals of four attempts." Then it describes how those four attempts are to be made.

Could you tell me how and who made the decision about reducing that to two attempts and by what authority did they do so?

Mr. CASE. Yes, we believe it is a combination of things. First of all, the decision was done by the Office of Integrated Veteran Care to do the reduction. You combine that with the directive that where the new EHR is in place, then the rules for the new EHR predominate, so to speak. The staff followed the rules in the one instance in our report and made two notifications, but they did not take the extra step because two more notifications were not made.

You know, our view is that this is a problem, first of all, the lesser number of notifications. Second, you really are setting up a system where there are two different approaches to the same issue. There are different healthcare efforts in whether it is in the new—

Mr. ROSENDALE. Did you find any place where the rule and the policy had actually been changed or is this just a decision that was handed down? I have not found it.

Mr. CASE. Yes, this is what happened. Once our report is published, we will describe the exact details, how it was done, but this is what happened. This came up in an incident in Columbus, Ohio.

Mr. ROSENDALE. Thank you. Thank you so much.

I will now recognize Mrs. Cherfilus-McCormick. Thank you.

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

This question is for anyone who would like to answer it. How would you measure the success of Lovell FHCC go live? Are you confident that it will be successful?

Mr. SICILIA. Thank you. Thank you for the question. It is obviously the key focus of what we are all working on here together.

I think we have lots of benchmarks and lots of inefficiencies and things that have been measured in all of the other go lives, most of which are not favorable, most of which experience difficulties with staff engagement, with training, with retention of the training, not being repetitive and not being available on demand, as well as general overall system performance. If we compare Lovell to the go lives at the other site, we should see a marked improvement in satisfaction, we should see a marked improvement in system reliability.

We should also, I think, be in a position, as the Pharmacy Council has testified, to figure out how much extra staff is required for the long term. What is unusual—it is not unusual that when you have a major go live for a very complicated system, that extra staff are required. This happens in commercial markets. This happens all the time. What is unusual is that you have to sustain that staff for a long period of time.

I believe that the metrics and feedback that we will get very quickly after the go live at Lovell will put us all in a much better position to determine that issue for the future as well. I am confident that the go live will be successful to directly answer your question as well.

Ms. CHERFILUS-McCORMICK. Thank you.

Dr. EVANS. I can answer that question as well, I think.

Ms. CHERFILUS-McCORMICK. Yes.

Dr. EVANS. It is important to remember that there have been challenges with regard to health IT at the James A. Lovell Federal Health Care Center. They have been running two different electronic health records, including maintaining custom software to try to keep those two electronic health records talking to each other while trying to run a single joint facility with a fully integrated staff. Those challenges have been long documented. I remember traveling to FHCC, I think, in 2019, and they were very, very eager to move to having a single integrated electronic health record.

One measure of success is that some of the challenges that they have had in running two electronic health records are improved in running a single integrated electronic health record. There are still going to be issues because there are different workflows unique to the DOD versus the VA. Pharmacy benefits are different in VA versus DOD, but having a single record will be important.

The other area where I would measure as success is whether the 3,200 approximate users there feel better supported than prior users have in this transition. Are we committing to supporting those users as they navigate the journey to use the new software, not just in a couple weeks after go live, but in the months to follow and, frankly, years to follow.

Ms. CHERFILUS-McCORMICK. Thank you. I wanted to go back to Mr. Sicilia. I want to pick up from where you left off when we were talking about the success. Far with the go lives, what do you feel have been the biggest causes of it not being successful? What could the VA do to support Oracle?

Mr. SICILIA. Well, in the initial set of go lives, I think there were system reliability issues that made it very difficult for end users to feel comfortable using the system, that it was not going to have an outage or something like that, and that was not good. As Dr.

Evans said, I do think that the human element, I think the standing shoulder-to-shoulder and making sure that we have that support for a much longer period of time than we had at the initial go live. The lesson learned is that we need to be there longer, we need to be onsite longer, we need to be next to the providers longer, and we need to be rolling out fixes for feedback far more quickly than we have. I believe that those things are in place. I believe that we have absorbed the lessons and we have been listening very closely to all the providers, to all of the councils.

I do believe that prior to previous go lives, which were largely handled, frankly, before most of us were involved with them, that the collaboration between Oracle and the VA and the VHA, as I have testified before, is the best that it has ever been. I am very optimistic in our collaboration. I am very optimistic in our daily and somewhat daily meetings for specific issues, like pharmacy happening right now, as well as our continued sync with the Deputy Secretary (DEPSEC) and others to make this happen.

I do believe that the team all in together is better than it has ever been, and I do believe that we will see results of that. In the level of go live.

Ms. CHERFILUS-McCORMICK. Thank you. I yield back.

Mr. ROSENDALE. Thank you very much, Representative Cherfilus-McCormick. I want to thank everyone for participating today.

I just want to close by saying that we are \$9 billion and 5 years into this system and we still do not have a functioning system. We do not have a fully functioning system.

Here is a nice list. Here is a list of contributions that Oracle Cerner has made to people that are serving in this body. I wish that you invested as much time, effort, and money into getting that system straight as you have in trying to buy votes on Capitol Hill.

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

Without objection, this meeting is adjourned.

[Whereupon, at 9:47 a.m., the subcommittee was adjourned.]

A P P E N D I X

PREPARED STATEMENTS OF WITNESSES

Prepared Statement of Neil Evans

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

I want to begin by thanking Congress and this Committee for your shared commitment to Veterans, and for your continued support of VA's EHRM efforts. For VA, the successful deployment of the Federal EHR further honors that shared commitment by facilitating seamless health care transitions for Service members and Veterans among Federal care settings. The new system will provide an accurate lifetime health record for Veterans among partners using the Federal EHR. For the newest members of the military, this EHR will serve them from the day they begin their military service, providing a seamless health care experience as they transition from active service to Veteran status.

VA remains committed to successfully implementing the Federal EHR across its enterprise. The suite of technologies that make up a modern EHR are part of a larger ecosystem of orchestrated technologies needed by VA to enhance the quality and safety of health care delivery, empower clinical teams with effective decision support, enhance clinical trial implementation, and advance Veteran engagement. In furtherance of these goals, the new Federal EHR system integrates with other health information technologies, ultimately simplifies the experience for Veterans and VA staff, enhances standardization across the VA enterprise, and will improve VA and the Department of Defense (DoD) interoperability with the rest of the United States health care system.

Moreover, the adoption of a product used by both VA and DoD will help to simplify health care delivery by providers in both Departments, which benefits patients who receive care in both systems or those transitioning from DoD to VA for care. Among the program's notable goals is to deliver and optimize unified, seamless, and trusted information flow between VA, DoD, the United States Coast Guard, the National Oceanic and Atmospheric Administration, and community providers.

As part of an EHRM Program reset (Reset) announced in April 2023, VA halted all work on future deployments of the Federal EHR system—except our planned joint VA and DoD deployment at the Captain James A. Lovell Federal Health Care Center (FHCC)—while the Department prioritizes improvements at the five sites that currently use the Federal EHR system. The purposes of the Reset are to: optimize the current state of the Federal EHR; to closely examine and address the issues that clinicians and other end users are experiencing; and to position VA for future deployment success.

During this Reset, VA is addressing issues with the Federal EHR system and re-directing resources from deployment activities to further optimize the new system at the sites where it is currently in use. Staff productivity levels, revenue cycle management, technical systems performance, and other areas require dedicated attention and resolution before deployments resume.

VA has an obligation to Veterans and taxpayers to get this right. We understand the concerns of this Committee regarding the Federal EHR system and its impact on Veterans, VA staff, trainees, and researchers who rely on it. We are committed to full transparency, and we appreciate your oversight. We look forward to further engagement with you and your staff to ensure that this modernization effort, and related health information technology modernization efforts, are successful.

Program Update

The EHRM Program Reset continues to move forward. VA is seeing incremental progress as it addresses the issues that clinicians and other end users are experi-

encing and optimizes the current state of the EHR system to ensure the enterprise-wide foundation is in place for success when deployments resume.

The initial priority activities of the Reset or workstreams focused on the following: (a) an effort to improve the Federal EHR system baseline through configuration changes and user adoption support; (b) workforce development for informatics staff both at the enterprise and field levels; (c) work to improve end-user support with a focus on help desk functions and incident management; (d) a technical “Get Well” plan to improve system reliability and performance; (e) work to enhance transparent communications for all stakeholders; and (f) preparation for the Lovell FHCC deployment.

These six workstreams continue, with requisite projects identified and initiated within those workstreams. The following four new workstreams have subsequently been added: (a) pre-work to enable the creation of a new deployment schedule; (b) the capture and reporting of metrics for the Reset and program overall; (c) post-deployment plans to transition sites to normal operations; and (d) analysis of VA workflows against the best practice models.

Beyond the work being managed within these workstreams, there is considerable effort focused on additional improvement areas during this period of Reset (for example enhancing pharmacy capabilities, identifying and repairing gaps in research workflows, integrating health professions trainees, identifying improvements for referral management functionality within the system, tracking investigational medications, and more).

The rate of progress during the EHRM Program Reset, while modest, has been steadily accelerating. We have increased engagement with the live sites to ensure their voices are heard, and they have let us know that they are seeing improvements. While our current progress is reassuring, we still have important work ahead. We are working hard to standardize and simplify the system, further improve system reliability and responsiveness, communicate more effectively with end-users, and improve training. Those associated with this effort across VA, feel a sense of urgency to complete the work of the Reset, continue optimizing the EHR system or our current users, and move to restart and complete deployments across the rest of the enterprise.

Improving the Pharmacy Experience

As mentioned, VA is advancing a number of priority areas in parallel with its Reset-related workstreams. One of these priorities is continuing to enhance pharmacy functionality within the Federal EHR system and across the enterprise. Since our last deep dive hearing into this area in May 2023, VA has made incremental and steady progress.

As of the date of this hearing, all but one of the original seven priority pharmacy enhancements have now been delivered through the twice-yearly “Block upgrades” (standard, biannual plans for enhancing the existing capabilities of the Federal EHR system). In February 2023, three were installed as part of the Block 8 upgrade. These enhancements improved providers’ visibility of current prescriptions and supplies of available medications, optimized system options for maintenance medications, and expanded details on prescription expiration dates, along with other enhancements.

Updates in the Block 9 release in August 2023 included three more priority enhancements that improved pharmacists’ ability to discontinue duplicate orders and increase their efficiency, review related orders and better understand patients’ comprehensive medications, and more quickly and effectively refill orders, among other improvements to the Federal EHR’s capabilities. Notably, additional updates in Block 9 resulted in a 24 percent decrease in user interruptions and a 24 percent reduction in application freezes for all users.

The Block 10 release, which occurred just days ago, includes pharmacy capability features that improve the automated coordination of prescription information between ordering clinicians and the pharmacy team; enable ordering clinicians to more easily request prescription refills for the Veterans they serve; and enhance how addresses are verified when pharmacy staff process mail prescriptions for patients. A feature to improve the automated coordination of prescription information between ordering clinicians and the pharmacy team has been installed to the system but not enabled.

In addition to impacting pharmacy and all other parts of the Federal EHR system, Block 10 also introduced the newest versions of the Millennium, MPages, Clairvia, and Rhapsody software that will allow the Federal EHR system to scale solutions for increased user capacity, improve stability, and lay the groundwork for future capabilities. These software upgrades also included corrections for numerous defects, again incrementally improving user experience. The semi-annual cube releases in

April and November 2023 also enhanced existing interfaces and capabilities and introduced nearly two dozen improvements and upgrades.

Beyond the block updates, specific to pharmacy, work was completed to improve the efficiency of the pending prescription queue used by pharmacy staff to process incoming prescriptions. Additional work was completed to increase the frequency of initiating receipt of new drug products into the data base from monthly to weekly. Two more projects to enhance the functionality of a mobile handheld device used by pharmacy staff and to enhance the EHR system's library of known medication images are also forthcoming. Several enhancements around refilling procedures are also planned.

Ultimately, the desired end State of VA's pharmacy enhancement efforts is reduced time and steps required by pharmacists during verification and dispensing workflows, and reduced time and steps required by providers during prescription ordering and renewal. More work is being done beyond the block updates to address longer-term considerations, including inpatient controlled substance ordering; provider provenance for renewal of controlled substance prescriptions; digital signature; and support resources needed for perpetual inventory implementation, among others. VA's pharmacy programs have achieved success by cultivating a culture of safety and continuous process improvement. I want to acknowledge and thank our pharmacy community for using this same approach to identify the improvements that are needed in the Federal EHR pharmacy system.

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

Upcoming Deployment to Lovell FHCC

As previously announced, the only exception regarding the pause on deployment activities is the planned deployment at the Lovell FHCC in March 2024—now, less than a month away. Lovell FHCC is the most integrated, jointly run VA and DoD health care facility. This will be the final deployment of the Federal EHR at a DoD-affiliated site. The joint VA/DoD deployment is on track to go ahead as planned, allowing all patients who visit the facility to be cared for using one EHR system. Lovell will also be the first instance of the Federal EHR system to have research studies live in the EHR in fulfillment of VA's third statutory mission. It is also the first VA site to have a significant complement of Health Professions Trainees contributing to Veteran care.

On February 6, 2024, VA, DoD, and the Federal EHRM (FEHRM) Office leadership convened at Lovell FHCC to confirm overall readiness to deploy the new system. As we approach cutover, conversations will continue to be held daily with the Veterans Integrated Service Network, the director of the facility, and VHA to ensure the necessary criteria are being met for a successful go-live. Furthermore, VA is working cross-functionally with teams at the FEHRM Office, DoD, and the leadership at Lovell FHCC on a daily basis. We expect that the facility will be ready to go live next month with no disruption to clinical care, medical education, or research activities.

Path to Restart

VA remains committed to taking the time necessary during this Program Reset to get this right for Veterans, VA clinicians, trainees, and researchers alike.

To this end, VA is developing a Reset Results Scorecard (previously referred to as "success criteria") focused on providing VA leadership and stakeholders metrics and thresholds that are clear, measurable, and actionable. The goal of the Reset Results Scorecard is to assist decision-makers in determining when to exit the Reset and restart deployment activities beyond Lovell FHCC. This scorecard establishes objectives and key results demonstrated within the following four primary areas: Improved User and Veteran experience or how the new EHR system affects VA users and Veterans; improved health system operations or how effectively the new EHR is supporting VA's business and clinical operations; mature product or how well the technical solutions themselves are functioning and how that is affecting the user and health system experience; and finally, mature program processes or how the implementation of best practices and trained staff improve program processes.

When our goals have been met, and the Reset concludes, VA will release a new deployment schedule and resume deployment activities with greater confidence in

the readiness of both the Federal EHR system and the VA health care system to successfully navigate this important change.

Conclusion: Federal EHR System Imperative

VA is continuing to move forward with a modern, commercial EHR solution in close coordination with our Federal partners, including DoD and the FEHRM Office. This new Federal EHR system will allow VA to standardize workflows, training, and technology management across VA using a single enterprise system and will support better coordination with DoD, other Federal partners, and private health providers.

Veterans remain the center of everything we do. They deserve high-quality health care that is safe, timely, Veteran-centric, equitable, evidence-based, and efficient. They also deserve access to high quality clinical trials. As improvements continue to be made through the duration of this Reset, VA will continually evaluate readiness of sites and the Federal EHR system to ensure success and patient safety. With the activities and improvements that are now underway, VA leaders are optimistic about the eventual success of the current Reset and subsequent full implementation of the Federal EHR throughout VA.

I again extend my gratitude to Congress for your commitment to serving Veterans with excellence. We look forward to responding to any questions that you may have.

Prepared Statement of David Case

DEPARTMENT OF VETERANS AFFAIRS
OFFICE OF INSPECTOR GENERAL

STATEMENT OF DEPUTY INSPECTOR GENERAL DAVID CASE
 OFFICE OF INSPECTOR GENERAL, DEPARTMENT OF VETERANS AFFAIRS
 BEFORE THE
 SUBCOMMITTEE ON TECHNOLOGY MODERNIZATION,
 US HOUSE OF REPRESENTATIVES COMMITTEE ON VETERANS' AFFAIRS
 HEARING ON
 EHR MODERNIZATION DEEP DIVE: CAN THE ORACLE PHARMACY SOFTWARE BE MADE
 SAFE AND EFFECTIVE?
 FEBRUARY 15, 2024

Chairman Rosendale, Ranking Member Cherfilus-McCormick, and Subcommittee members, thank you for the opportunity to discuss the Office of Inspector General's (OIG) oversight of the Department of Veterans Affairs' electronic health record modernization (EHRM) program's pharmacy functions. The OIG recognizes the enormity and complexity of converting VA's electronic health record (EHR) system for millions of veterans receiving VA care and acknowledges the significant work and commitment of VA staff to accomplish this task. For more than four years, OIG staff have been engaging with VA employees at EHRM deployment sites in Washington, Oregon, Ohio, Illinois, and other locations, and have observed their unwavering commitment to prioritizing the care of patients while mitigating implementation challenges.

The OIG has published 16 products addressing the EHRM program and system implementation between April 2020 and this hearing with a total of 70 recommendations for corrective action, not including the currently unpublished products that will be discussed at this hearing. Though this statement does not detail all of these previous reports and their findings, a comprehensive list of recommendations has been included as an appendix. Each oversight report is meant to help VA improve the new system's implementation and support prompt, quality health care for veterans. Failure to satisfactorily complete the corrective actions associated with these recommendations can increase risks to patient safety and the ability to provide high-caliber care at the new EHR sites. Fully addressing oversight recommendations can also help minimize considerable cost escalations and delays in potential future deployments. The OIG is therefore concerned about the 18 recommendations that have been open (not implemented or fully addressed) for longer than two years. 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. The statement that follows emphasizes the need to not only implement recommendations but sustain change by fully addressing the problems identified in OIG reports. For example, a March 2022 report is highlighted to

demonstrate that more work is required on VA's part to ensure that longstanding medication management issues have not yet been completely resolved.¹

In addition, there are three forthcoming publications containing OIG findings about the operation of the new EHR system. One report will specifically address pharmacy-related patient safety issues. Although the other two are not related to pharmacy concerns, it is important to alert the members of this subcommittee that these upcoming reports will identify shortcomings in the appointment scheduling package of the new EHR that can affect veteran engagement and appointment wait times. Currently, these publications are in draft and, consistent with OIG practices, are being reviewed by the Department. These reviews allow VA offices to comment on OIG findings and recommendations, as well as to provide responsive action plans to implement the recommendations. After receiving VA's responses, OIG staff will integrate any feedback into the final reports and publish them. While it is not the OIG's routine practice to testify regarding not-yet-published reports, due to the timing of this hearing and VA being in receipt of the drafts, the pertinent oversight findings will be generally discussed today.

This testimony will first focus on the OIG report under VA review that discusses pharmacy-related patient safety issues and users' challenges with the new EHR at the VA Central Ohio Healthcare System in Columbus (referred to as "Columbus" throughout this statement) and across the nation. This report underscores OIG concerns that pharmacy and medication management issues are not fully resolved, although highlighted in OIG reports as early as April 2020.² This statement will then discuss the pending publication that highlights continued issues with the new EHR's patient appointment scheduling package experienced by facility staff at EHR deployment sites. The last upcoming OIG report on the new EHR examines an appointment scheduling package failure that contributed to the death of a patient.

PHARMACY-RELATED PATIENT SAFETY ISSUES CONTINUE AT SITES USING THE NEW EHR

In May 2021, after VA's first deployment of the new EHR at the Mann-Grandstaff VA Medical Center in Spokane, Washington, a pharmacy patient safety team under the VA National Center for Patient Safety (NCPS) identified patient safety issues and staff experiencing multiple 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. Following subsequent deployment of the new EHR to Columbus in April 2022 (more than a year later), the OIG determined that previously identified NCPS-identified patient safety and usability issues were still a

¹ VA OIG, [*Medication Management Deficiencies after the New Electronic Health Record Go-Live at the Mann-Grandstaff VA Medical Center in Spokane, Washington*](#), March 17, 2022. This report focused on the challenges facing clinicians using the medication management system, not specifically on pharmacy operations.

² 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.

factor in many of Columbus's pharmacy-related patient safety reports. Although Oracle Health has since resolved some of the NCPS-identified issues, the OIG is concerned that the new EHR will continue to be deployed at medical facilities prior to resolving the remaining issues related to inaccurate medication ordering, reconciliation, and dispensing that can affect patient safety.³

The most recent OIG work on pharmacy-related patient safety issues began with a review of an allegation that the new EHR's implementation led to a prescription backlog at Columbus after the system went live on April 30, 2022. The OIG found that facility leaders took timely and sustainable steps to manage the backlog issue. During its review, however, the OIG identified other unresolved high-risk patient safety issues, including patient medication inaccuracies, user challenges, inaccurate medication data, staff's creation of numerous work-arounds to provide patient care, a volume of staff educational materials for pharmacy-related functions that was overwhelming, and insufficient staffing.

National Pharmacy-Related 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).⁴ For patients who travel to receive care at any medical centers using the legacy EHR, the JLV application allows healthcare providers to access a "read only" version of a patient's medical record from both the legacy and new systems.⁵ The HDR is a database that stores patient-specific clinical information, including medications and allergies, from both the new and legacy VA EHR systems.⁶ Providers use this information to support treatment decisions. Every medication used in VHA has a VA Unique Identifier (VUID), which is an assigned, distinct number. Because veterans are eligible to receive health care at any VA facility, there must be accurate medication information available to providers at all facilities. In this case, 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 legacy EHR facility provider, and this provider enters a medication order, a legacy system software interface accesses the medication's VUID from the HDR database 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 the medications and allergies previously documented in the patient's record, including medication orders coming from the new EHR.

³ 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.

⁴ JLV is a read-only, noneditable, 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.

⁵ 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.

⁶ 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."

Software Coding Errors Created Patient Safety Issues

An error in Oracle Health's software coding resulted in the widespread transmission of incorrect VUIDs from new EHR sites to legacy EHR sites. The OIG learned these unique identifiers became inaccurate during their transmission to the HDR when fills for certain prescriptions were processed through the Consolidated Mail Outpatient Pharmacy (referred to as the mail order pharmacy).⁷ In short, this error created the potential for medication-related patient safety issues.

On March 31, 2023, staff from a legacy EHR site noted an incorrect medication order check when prescribing a new medication to a patient who had previously received care and medications at a new EHR site. This led to the discovery of the VUID transmission error, and an issue brief was sent later that same day to VA and VHA leaders describing the event and the cause. VHA pharmacy leaders also alerted VHA personnel and leaders of the issue's potential clinical impact. The email provided specific instructions on how to mitigate the issue and requested recipients to "please share widely." Days later, patient safety managers across VHA were told that drug-to-drug interactions, duplicate medication orders, and allergy checks were not functioning as expected, and they were provided with remedial actions.

Oracle Health applied a successful software patch on April 7, 2023, to ensure accurate VUIDs were applied to all mail order pharmacy-processed prescriptions from that date forward. However, the OIG learned the incorrect VUIDs sent from new EHR sites and stored in the HDR from as far back as October 2020 were not corrected. A VHA leader shared that on November 29, 2023, the VHA Pharmacy Council reported withdrawing a request for Oracle Health to send corrected medication VUID data to the HDR. The council based its decision on the presumption that all remaining inaccurate medication VUIDs that were related to the mail order pharmacy prescriptions would expire in early April 2024, one year from the application of the patch, and the data would be corrected at that time.⁸

The OIG is concerned that patient medication data remains inaccurate almost a year after VA learned of the issue. The mail order pharmacy-related data generated from approximately 120,000 patients served by new EHR sites are still incorrect. These patients face an ongoing risk of an adverse medication-related event if they receive care and medications from a VA medical center using the legacy EHR system.

Other Medication-Related Data Transmission Issues Pose Threats to Patient Safety

The OIG learned that research into the cause of the mail order pharmacy-related VUID error described above led to the discovery of other problems associated with transmission of medication and allergy

⁷ 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.

⁸ In VHA, most prescriptions expire one year after the initial medication fill.

information from the new EHR to the HDR. On June 15, 2023, the NCPS sent a patient safety notice to VHA patient safety staff concerning data transmission issues and errors (mail order pharmacy-related and others), 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 Electronic Health Record Modernization Integration Office (EHRM-IO) data leader noted 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.

When that June 15 notice was sent, there were no solutions and no clear determination of which patients were affected or may have experienced harm. As VHA cannot determine which patients were at risk of a patient safety event from the data transmission errors, a VHA leader informed the OIG that all patients who have been prescribed any medications at a new EHR site or have medication allergies documented at a new EHR site are "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.⁹

The OIG is concerned that patients served by a new EHR site who also receive care at a legacy EHR site may be prescribed contraindicated medications and that healthcare providers at legacy sites are making clinical decisions based on inaccurate data. Further, the OIG is not confident in EHRM-IO leaders' oversight and control of the new systems' HDR interface programming.

For example, the OIG learned of a patient with posttraumatic stress disorder and traumatic brain injury with adrenal insufficiency whose care was influenced by inaccurate medication data when the patient was not prescribed a critical lifesaving therapy upon admission to a residential rehabilitation treatment program at a legacy EHR site. Four days prior to admission, a legacy EHR site pharmacist used the

⁹ The data represents 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.

legacy EHR to perform a medication reconciliation for this patient. The data available to the pharmacist conducting the reconciliation did not include the patient's most recent prednisone prescription that had been ordered by a medical provider in a facility using the new EHR.

A nurse practitioner performed another reconciliation when the patient was admitted to the residential program, but the patient was unsure of all their medications. As the most recent prednisone prescription was not visible in the legacy EHR, the prednisone appeared to have been completed at least three months prior to admission and was therefore not prescribed in the admission medication orders.

On the fifth day in the residential program, the patient began exhibiting unusual behaviors associated with the lack of prednisone. The patient realized they needed more prednisone, but the nurse explained there was no prednisone on the patient's medication list. Eventually, the patient found the active prednisone order on their personal cell phone and had to be transferred to a local emergency room for care. This example also shows the difficulty with completing numerous, accurate manual reconciliations, particularly for patients with impaired cognition.

Patients at New EHR Sites Have Not Been Notified of the Risk of Harm Related to Data Transmission Issues

Per VHA policy, a disclosure is warranted for harmful or potentially harmful adverse events that "have a potential to affect, or may have already affected multiple patients at one or more VA medical facilities."¹⁰ VHA leaders convened a Clinical Episode Review Team (CERT) to discuss the issues and errors related to the transmission of inaccurate pharmacy data from the new EHR to the HDR.¹¹ On June 21, 2023, the CERT executive director sent a memorandum addressed to the under secretary for health outlining the team's review and recommendations, which included a communication plan to patients who have received a prescription through a new EHR site. The memorandum and plan specified that the intended patient communication was not a "disclosure" but a "general patient safety/awareness communication" encouraging patients to collaborate with their providers during the medication reconciliation process. The memorandum also documented that the CERT was still determining the feasibility of doing a look-back review to identify patient harm.

A CERT leader emailed the communication plan to VHA, Veterans Integrated Service Networks (VISN) 10 and 20, and Columbus leaders on August 7, 2023. When asked, the CERT executive director told the OIG there was no assigned timeline and that it was left to leaders from VHA, VISNs, and Columbus to move forward with the plan or request changes. In late October 2023, a Columbus leader told the OIG,

¹⁰ VHA Directive 1004.08, *Disclosure of Adverse Events to Patients*, October 31, 2018.

¹¹ The deputy under secretary for health for operations and management convenes a CERT to conduct a "coordinated triage process for review of each potential adverse event that may require large-scale disclosure." The CERT met between April 13 and May 15, 2023.

“there were no actions taken as it was not clear at the time of the CERT communication . . . that recommended communications were finalized.”

As of September 2023, about 250,000 veterans—who either received medication orders or had medication allergies documented in the new EHR from October 2020—may be unaware of the potential risk for a medication- or allergy-related patient safety event if they receive care at a legacy EHR site.¹² A VHA leader told the OIG that, as of December 2023, they had no knowledge of the development of a comprehensive strategy to conduct a look-back of the care of the growing number of patients who have received and continue to receive services, including medication prescriptions, at legacy sites.

Risks to Patients from HDR Transmission Issues Remain Despite VHA’s Mitigation Actions

As early as March 31, 2023, VHA leaders sent the series of notifications described above about the transmission issues and outlined actions to offset the risk of patient harm. These notifications included instructions for legacy site leaders to have medical providers perform multistep manual safety checks to replace automated software safety checks when prescribing new medications for patients previously cared for at a new EHR site. These manual safety checks are complex, time-consuming, and reliant on the vigilance of pharmacists and frontline staff. The OIG is concerned that this increased vigilance is unsustainable by pharmacists and frontline staff who are responsible for clinical decision-making, and it may lead to burnout and medication-related patient safety events.

The New EHR’s Negative Effect on Columbus Pharmacy Staff

The OIG determined that Columbus’s chief of pharmacy prepared for challenges during the 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.

A VHA leader stated that challenges with the new EHR’s usability also led to the creation of national and facility-level work-arounds and educational materials for pharmacy personnel. In May 2021, the NCPS pharmacy patient safety team created seven work-arounds for pharmacy staff. After going live at the Columbus facility, pharmacy leaders created approximately 29 additional work-arounds to support pharmacy staff and prevent delays. Facility pharmacy leaders also developed approximately 25 educational materials, such as tip sheets, reference guides, and job aids, to further support pharmacy staff. The OIG is concerned that the numerous work-arounds and educational materials are overwhelming for pharmacy staff to implement and may give rise to inconsistent practices, which increase risks to patient safety.

¹² September 29, 2023 was the last date that the OIG received updated information from CERT regarding the status of any patient communication mailings.

In addition, the new EHR's usability issues contributed to staff concerns 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 pharmacy staff increased and the Best Places to Work score for pharmacy staff decreased from the previous fiscal year.¹³ Additionally, Columbus pharmacy employees, including the chief of pharmacy, told the OIG that the new EHR negatively affected pharmacy staff morale. VHA pharmacy and patient safety leaders told the OIG of a need for increased staff vigilance to avoid patient harm.

Although the focus of this hearing is on pharmacy concerns with the new EHR, the OIG has been following up on other critical features of the Oracle Health system that affect veterans' ability to gain prompt access to quality health care. These include challenges with patient appointment scheduling that are the subject of upcoming oversight reports.

PATIENT APPOINTMENT SCHEDULING PROBLEMS HAVE NOT BEEN RESOLVED

In 2021 and 2022, the OIG reported on difficulties that employees experienced when using the patient appointment scheduling package at the Chalmers P. Wylie VA Ambulatory Care Center in Columbus and the Mann-Grandstaff VA Medical Center in Spokane.¹⁴ The OIG found VHA and EHRM-IO did not fully resolve known limitations in the scheduling system, leading to reduced effectiveness and increased risk of patient care delays. The problems identified in 2021 persisted through the OIG's 2022 reports, such as schedulers developing 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 assess Oracle Health's compliance with contract terms for handling tickets staff submitted on problems they experienced.

The OIG Determined Unresolved Scheduling Package Problems May Negatively Affect Future Sites

One of the draft OIG work products currently with VA for comment discusses the new EHR's scheduling package that has systemic, facility-level problems that will potentially be exacerbated at larger, more complex VHA medical facilities.

¹³ The OIG compared 2021 and 2022 facility All Employee Survey 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. Burnout is measured as a percentage score ranging from 0–100; lower percentages are more favorable. "Best Places to Work" is a summary measure of the group's satisfaction with the job, organization, and likelihood to recommend VA as a good place to work. The score ranges from 0–100 points; higher scores are more favorable.

¹⁴ VA OIG, *Care Coordination Deficiencies after the New Electronic Health Record Go-Live at the Mann-Grandstaff VA Medical Center in Spokane, Washington*; VA OIG, [New Patient Scheduling System Needs Improvement as VA Expands Its Implementation](#), November 10, 2021.

The Displaced Appointment Queue Can Result in Appointments Not Being Rescheduled

The OIG determined that schedulers using the new EHR are experiencing difficulties with what is termed “the displaced appointment queue,” which at times resulted in appointments not getting rescheduled. That queue is used by scheduling staff to identify appointments needing to be rescheduled if a healthcare provider has a schedule change. The new EHR handles these schedule changes by moving all affected appointments from the provider’s schedule to the displaced appointment queue. Staff reported that the EHR does not always route appointments to the queue and that properly routed appointments sometimes disappeared from the queue. As a result, the schedulers could not rely on the queue for identifying appointments that needed to be rescheduled.

EHRM-IO said it was aware of the defects in the operation of the displaced appointment queue and that two system updates scheduled for issuance in February and April 2024 are intended to address the defects. While EHRM-IO stated the medical facilities were provided guidance informing schedulers how to reschedule patients without using the queue, EHRM-IO also stated that “the queues are intended to be a safety net, especially the displaced queue; if [schedulers] are following the right business rules, then nothing would fall to the displaced queue.” However, the OIG noted that the defects in the operation of the displaced appointment queue made it an unreliable safety net as appointments may not reach the queue or disappear.

Despite EHRM-IO assertions that the queue should be used as a safety net, the review team found cases in which medical facility staff relied on the displaced queue to schedule appointments. The OIG could not definitively identify how many patients at new EHR sites were impacted. However, the problems could be much more pervasive and severe when the EHR is deployed at larger facilities, where greater numbers of personnel will have more schedule changes that require appointment rescheduling.¹⁵

Previously Documented Scheduling Inefficiencies and Errors Remain

The concerns identified above are compounded by the schedulers’ perceptions that EHR patient information is still unreliable, ongoing difficulties in changing appointment types, and the inability to automatically mail appointment reminder letters.

OIG reports issued in 2021 and 2022 found that data migration errors caused outdated patient demographic information needed for scheduling, such as names and addresses, from the Department of Defense’s (DoD) Defense Enrollment Eligibility Reporting System (DEERS) to override the more current and accurate patient data in VHA’s legacy system.¹⁶ As reflected in those reports, the OIG

¹⁵ A separate issue impacting schedulers and providers is that they cannot easily share information about appointments, such as notes explaining why an appointment was canceled, which is a change from the legacy EHR system.

¹⁶ VA OIG, *New Patient Scheduling System Needs Improvement as VA Expands Its Implementation*; VA OIG, *Care Coordination Deficiencies after the New Electronic Health Record Go-Live at the Mann-Grandstaff VA Medical Center in Spokane, Washington*.

considered the problems associated with inaccurate DEERS information to be of significant concern for VA's plan to implement the EHR at other sites. EHRM-IO acknowledged issues with inaccurate patient information from DEERS, but these issues were fixed with a February 2023 software update. This update made VA's Veteran Enrollment System the source for patient data instead of DEERS. However, veterans still must update some information, such as name or gender, directly with DoD. Schedulers also continue to feel the effects of the inaccuracy of DEERS information. Some schedulers have spent additional time verifying information because they appeared unaware of the system update or that the update still required veterans to update some information with DoD.

In addition, 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.¹⁷ 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 cancelling the appointment and reordering a new appointment. 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 interim guidance for schedulers' mitigation strategies. However, 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.

Another weakness the OIG previously identified was that the new EHR could not automatically send reminder letters to patients for upcoming appointments.¹⁸ While not required by VA policy, veterans were accustomed to and relied on these letters from the legacy EHR. The letters also reduced "no shows" and missed appointments. The automated mailing of reminder letters is not a function within the new EHR, and during this review, the team determined that this system limitation still exists. In November 2023, EHRM-IO had planned to release an interface that would allow schedulers to automatically print appointment reminders. However, at the end of December 2023, they informed the OIG that this interface would not be ready before the planned March 2024 EHR go-live at the Captain James A. Lovell Federal Health Care Center in North Chicago.

Facilities that continue to mail appointment reminder letters must manually print and mail them to patients, which is a time-consuming process for staff.¹⁹ 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

¹⁷ VA OIG, *New Patient Scheduling System Needs Improvement as VA Expands Its Implementation*.

¹⁸ VA OIG, *New Patient Scheduling System Needs Improvement as VA Expands Its Implementation*.

¹⁹ The team also found that facilities continuing to routinely send reminder letters (or that did so at the veteran's request) also sometimes encountered problems in preparing the letters using the EHR. The OIG team's review of the "trouble" tickets disclosed that EHR-generated reminder letters sometimes printed the mailing addresses in places that would not be visible through the window of the mailing envelope, included extra information, or contained incorrect mailing addresses.

2023. The other four facilities using the new EHR have undertaken different solutions to address this system limitation. Some now rely instead on other methods, such as autogenerated text messages and emails or phone calls. Consequently, the VA should expedite the release of the interface to all the medical centers that have deployed the EHR. VHA should also consider whether that solution should be implemented uniformly at the facilities.

The OIG team also identified continued issues with schedulers feeling that training provided by Oracle Health was inadequate. Some new EHR sites have developed their own local practices and training to supplement the Oracle Health training, and VHA 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 policy. VHA is working on creating standard procedures for scheduling.

Based on the findings, facilities should assess staffing levels and overtime use prior to EHR deployment.

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

In the third EHR report that is currently with VA for review and comment, the OIG confirmed 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. While a letter was sent and calls made on the day of the missed appointment, staff did not complete the telephone calls on separate days as required. 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 required rescheduling efforts. The OIG concluded that the lack of contact efforts may have contributed to the patient's disengagement from mental health treatment and, ultimately, the patient's substance use relapse and death.

As an additional matter, the OIG found that VHA was requiring mental health staff at new EHR sites to make two 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 a disparity among veterans accessing care.

Requirements for scheduling efforts are meant to maximize opportunities to engage patients. Further, the OIG would expect VHA leaders to focus on identifying strategies to address administrative barriers, such as software deficiencies, without compromising established VHA patient care standards.

CONCLUSION

This Subcommittee and VA have focused tremendous resources on the successful transition to the new EHR system. The OIG has published multiple reports identifying numerous patient safety issues related to the new EHR. While VHA paused deployments until the new EHR is "highly functioning at current sites and ready to deliver for Veterans and VA clinicians at future sites," the planned go-live at the Lovell Federal Health Care Center is still scheduled for March 2024, despite myriad unmitigated issues.

The OIG is committed to providing impactful and practical recommendations that flow from its oversight work to help VA deploy the new EHR efficiently and in a manner that improves veterans' experiences. At prior hearings, the OIG has identified deficiencies that affect the EHRM program's progress and its risk to patient safety. The reports in this statement show that many concerns remain unresolved. There are also higher-level questions that remain unanswered. It is unclear whether identified problems are being adequately resolved before additional deployments. There is also the question of whether there is sufficient transparency and communication among EHRM-IO, VHA and facility leaders, VA leaders, and Oracle Health needed for quality control and critical coordination. Trust in VA is also dependent on patients being fully and quickly advised when issues affecting them are identified and addressed. As VA moves toward its deployment next month at a complex facility jointly operated with the Department of Defense, transparency, communication, and program management will be essential to getting it right. Failures in these areas risk cascading problems. The OIG will continue to monitor EHRM efforts to help recommend improvements needed to fulfill its promise to the veteran community and make the most effective use of taxpayer dollars. Chairman Rosendale, this concludes my statement. I would be happy to answer any questions you or other members may have.

APPENDIX – ALL ELECTRONIC HEALTH RECORD MODERNIZATION PRODUCTS AND RECOMMENDATIONS

REVIEW OF ACCESS TO CARE AND CAPABILITIES DURING VA'S TRANSITION TO A NEW EHR SYSTEM AT MANN-GRANDSTAFF VA APRIL 27, 2020, 19-09447-136

1. The under secretary for health (USH), in conjunction with the Office of Electronic Health Record Modernization (OEHRM now EHRM-IO) evaluates the impact of the new EHR implementation on productivity and provides operational guidance and required resources to facilities prior to go-live. **Status: Open.** VA's targeted completion date: Initial response at Initial Operating Capability go-live; revised versions at subsequent go-live dates.
2. The USH, in conjunction with OEHRM, identifies the impact of the mitigation strategies on user and patient experience at go-live and takes action, as needed. **Status: Closed 11/8/2022.**
3. The executive director, OEHRM, in conjunction with the USH, ensures that clear guidance is given to facility staff on what EHR capabilities will be available at go-live. **Status: Closed 1/13/2021.**
4. The USH, in conjunction with OEHRM, reevaluates the EHRM deployment timeline to minimize the number of required mitigation strategies at go-live. **Status: Open.** VA's targeted completion date: May 2020.
5. The VISN director collaborates with facility leaders to implement VA-provided operational guidance and supports required resources needed throughout the transition to the new EHR system. **Status: Closed 7/31/2021.**
6. The VISN director ensures that positions required for the transition to the new EHR system are staffed and trained prior to go-live. **Status: Closed 10/16/2020.**
7. The Mann-Grandstaff VA Medical Center director ensures that community care consults are managed through go-live to ensure accuracy and completeness, and to avoid the need for manual reentry after go-live. **Status: Closed 9/22/2021.**
8. The Mann-Grandstaff VAMC director ensures that patients receive medication refills in a timely manner throughout the transition to the new EHR system. **Status: Closed 9/22/2021.**

DEFICIENCIES IN INFRASTRUCTURE READINESS FOR DEPLOYING VA'S NEW EHR SYSTEM APRIL 27, 2020, 19-08980-95

1. The executive director of OEHRM should establish an infrastructure-readiness schedule for future deployment sites that incorporates lessons learned from the DoD. **Status: Closed 10/1/2020.**
 2. The executive director of OEHRM should reassess the enterprise-wide deployment schedule to ensure projected milestones are realistic and achievable, considering the time needed for facilities to complete infrastructure upgrades. **Status: Closed 10/1/2020.**
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3. The executive director of OEHRM should implement tools to comprehensively monitor the status and progress of medical devices at the enterprise level. *Status: Closed 9/21/2021.*
 4. The executive director of OEHRM should standardize infrastructure requirements in conjunction with the VHA and the OIT and ensure those requirements are disseminated to all necessary staff. *Status: Closed 7/16/2021.*
 5. The executive director of OEHRM should evaluate physical infrastructure for consistency with OEHRM requirements and monitor completion of those evaluations. *Status: Closed 11/9/2022.*
 6. The executive director of OEHRM should fill infrastructure-readiness team vacancies until optimal staffing levels are attained. *Status: Closed 9/12/2022.*
 7. The executive director of OEHRM should ensure physical security assessments are completed and addressed at future EHR deployment sites. *Status: Closed 11/9/2022.*
 8. The Mann-Grandstaff VAMC director should ensure all access points to physical infrastructure are secured and inaccessible to unauthorized individuals. *Status: Closed 10/1/2020.*

DEFICIENCIES IN REPORTING RELIABLE PHYSICAL INFRASTRUCTURE COST ESTIMATES FOR THE EHRM PROGRAM MAY 25, 2021, 20-03178-116

1. The executive director for OEHRM should ensure an independent cost estimate is performed for program life cycle cost estimates including related physical infrastructure costs funded by VHA. *Status: Closed 11/9/2022*
 2. The VA assistant secretary for management and chief financial officer should ensure the Office of Programming, Analysis and Evaluation, or another office performing its duties, conducts independent cost estimates as required by VA financial policy, and performs an independent estimate of EHRM program life cycle cost estimates including physical infrastructure. *Status: Closed 11/9/2022*
 3. The director of special engineering projects for VHA's Office of Healthcare Environment and Facilities Programs should develop a reliable cost estimate for EHRM program-related physical infrastructure in accordance with VA cost-estimating standards and incorporate costs for upgrade needs identified in facility self-assessments and scoping sessions. *Status: Closed 7/26/2022.*
 4. The director of special engineering projects should also continuously update physical infrastructure cost estimates based on emerging requirements and identified project needs. *Status: Closed 1/20/2022.*
 5. The executive director for OEHRM should ensure costs for physical infrastructure upgrades funded by VHA or other sources needed to support the EHRM program are disclosed in program life cycle cost estimates presented to Congress. *Status: Open.* VA's targeted completion date: July 31, 2021.
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**UNRELIABLE INFORMATION TECHNOLOGY INFRASTRUCTURE COST ESTIMATES
FOR THE EHRM PROGRAM** JULY 7, 2021, 20-03185-151

1. The executive director of OEHRM should ensure an independent cost estimate is performed for program life-cycle cost estimates related to IT infrastructure costs. **Status:** Closed 11/9/2022.
2. The executive director of OEHRM should reassess the cost estimate for EHRM program-related IT infrastructure and refine as needed to comply with VA's cost-estimating standards. **Status:** Open. VA's targeted completion date: Under active revision as part of the strategic review and will be provided as soon as information is available.
3. The executive director of OEHRM should develop procedures for cost-estimating staff that align with VA cost-estimating guidance. **Status:** Open. VA's targeted completion date: Under active revision as part of the strategic review and will be provided as soon as information is available.
4. The executive director of OEHRM should ensure costs for all IT infrastructure upgrades funded by OIT and VHA or other sources needed to support the EHRM program are disclosed in program life-cycle cost estimates presented to Congress. **Status:** Open. VA's targeted completion date: This is part of the strategic review and will be provided as soon as information is available.
5. The executive director of OEHRM should formalize agreements with OIT and VHA identifying the expected contributions from each entity toward IT infrastructure upgrades in support of the EHRM program. **Status:** Open. VA's targeted completion date: This is part of the strategic review and will be provided as soon as information is available.
6. The executive director of OEHRM should establish procedures that identify when life-cycle cost estimates should be updated and ensure those updated estimates are disclosed in the program's congressionally mandated reports. **Status:** Open. VA's targeted completion date: This is part of the strategic review and will be provided as soon as information is available.

**TRAINING DEFICIENCIES WITH VA'S NEW EHR SYSTEM AT THE MANN-GRANDSTAFF
VA** JULY 8, 2021, 20-01930-183

1. The USH explores the establishment of a group of VHA staff composed of core user roles with expertise in VHA operations and Cerner EHR use with data architect level knowledge to lead the effort of generating optimized VHA clinical and administrative workflows. **Status:** Closed 1/23/2023.
 2. The deputy secretary establishes an EHR training domain that ensures close proximity to the production environment and is readily available to all end users during and following training. **Status:** Closed 1/23/2023.
 3. The deputy secretary ensures end users receive training time sufficient to impart the skills necessary to use the new EHR prior to implementation. **Status:** Closed 1/23/2023.
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4. The deputy secretary ensures the user role assignment process addresses identified facility leaders and staff concerns. *Status: Closed 1/23/2023.*
 5. The deputy secretary ensures Cerner trainers and adoption coaches have the capability to deliver end user training on Cerner and VHA EHR software workflows. *Status: Closed 1/23/2023.*
 6. The deputy secretary evaluates the process of super user selection and takes action as indicated. *Status: Closed 2/1/2022.*
 7. The deputy secretary reviews OEHRM's performance-based service assessments for Cerner's execution of training to determine whether multiple, recurrent concerns are being accurately captured and addressed. *Status: Closed 1/23/2023.*
 8. The deputy secretary oversees the revision of an OEHRM training evaluation plan and ensures implementation of stated objectives. *Status: Closed 1/23/2023.*
 9. The deputy secretary reviews the EHRM governance structure and takes action as indicated to ensure the under secretary for health (USH) role in directing and prioritizing EHRM efforts is commensurate with VHA's role in providing safe patient care. *Status: Closed 2/1/2022.*
 10. The USH establishes guidelines and training to capture new EHR-related patient complaints, including patient advocacy. *Status: Closed 8/5/2022.*
 11. The USH ensures an assessment of employee morale following implementation of a new EHR and takes action as indicated. *Status: Closed 2/1/2022.*

NEW PATIENT SCHEDULING SYSTEM NEEDS IMPROVEMENT AS VA EXPANDS ITS IMPLEMENTATION NOVEMBER 10, 2021, 21-00434-233

1. The USH coordinates with the OEHRM executive director (ED) to continue to make improvements to the scheduling training as needed to address feedback from schedulers. *Status: Closed 12/21/2022*
 2. The USH coordinates with the OEHRM ED to require that some schedulers from each clinic fully test the scheduling capabilities of their clinics, solicit feedback from the schedulers to identify system or process issues, and make improvements as needed. *Status: Closed 6/22/2023*
 3. The USH coordinates with the OEHRM ED to issue guidance to facility staff on which date fields in the new system schedulers should use to measure patient wait times. *Status: Closed 1/2/2024.*
 4. The USH coordinates with the OEHRM ED to develop a mechanism to track and then monitor all tickets related to the new scheduling system, and ensure OEHRM evaluates whether Cerner effectively resolved the tickets within the timeliness metrics established in the contract. *Status: Closed 10/27/2022.*
 5. The USH coordinates with the OEHRM ED to develop a strategy to identify and resolve scheduling issues in a timely manner as OEHRM deploys the EHR at future facilities. *Status: Closed 10/27/2022.*
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6. The USH coordinates with the OEHRM ED to develop a mechanism to assess whether facility employees accurately scheduled patient appointments in the new scheduling system, and then ensure facility leaders conduct routine scheduling audits. Status: Closed 7/14/2023.
 7. The USH coordinates with the OEHRM ED to evaluate whether patients received care within the time frames directed by VHA policy when scheduled through the new system. Status: Open. VA's targeted completion date: July 2022.
 8. The OIG recommends that the VA OEHRM ED provide guidance to schedulers to consistently address system limitations until problems are resolved. Status: Closed 10/27/2022.

MEDICATION MANAGEMENT DEFICIENCIES AFTER EHR GO-LIVE AT THE MANN-GRANDSTAFF VAMC MARCH 17, 2022, 21-00656-110

1. The deputy secretary ensures that substantiated and unresolved allegations discussed in this report are reviewed and addressed. Status: Open. VA's targeted completion date: May 2022.
2. The deputy secretary ensures medication management issues related to the new EHR that are identified subsequent to this inspection be reported to the OIG for further analysis. Status: Closed – Not Implemented 9/28/2022.

CARE COORDINATION DEFICIENCIES AFTER THE NEW EHR GO-LIVE AT THE MANN-GRANDSTAFF VAMC MARCH 17, 2022, 21-00781-109

1. The deputy secretary ensures that substantiated and unresolved allegations noted in this report are reviewed and addressed. Status: Closed 10/3/2023.

TICKET PROCESS CONCERNS AND UNDERLYING FACTORS CONTRIBUTING TO DEFICIENCIES AFTER THE EHR GO-LIVE AT MANN-GRANDSTAFF VAMC
MARCH 17, 2022, 21-00781-108

1. The deputy secretary completes an evaluation of the new EHR problem resolution processes and takes action as warranted. Status: Closed 2/7/2022.
 2. The deputy secretary completes an evaluation of the underlying factors of substantiated allegations identified in this report and takes action as warranted. Status: Closed 10/19/2022.
 3. The deputy secretary ensures the EHRM deployment schedule reflects resolution of the allegations and concerns discussed in this report. Status: Open. VA's targeted completion date: March 2022.
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THE EHRM PROGRAM DID NOT FULLY MEET THE STANDARDS FOR A HIGH QUALITY, RELIABLE SCHEDULE APRIL 25, 2022, 21-02889-134

1. The EHRM program management office ED should comply with internal guidance and ensure the development of an integrated master schedule (IMS) that complies with standards adopted from GAO for scheduling. **Status: Open.** VA's targeted completion date: December 2022.
2. The EHRM program management office ED should take action to improve stakeholder coordination in the development of the program schedules to ensure activities from all relevant VA entities are included. **Status: Open.** VA's targeted completion date: August 2022.
3. The EHRM program management office ED should develop procedures for when and how staff should perform an initial schedule risk analysis and conduct periodic updates as needed. **Status: Open.** VA's targeted completion date: December 2022.
4. The EHRM program management office ED should ensure consistency between contract language and program office plans or other guidance identifying the entity or individuals responsible for developing and maintaining the program's work breakdown structure and IMS. **Status: Open.** VA's targeted completion date: November 2022.
5. The EHRM program management office ED should evaluate the contract requirements for schedule management and modify as needed to ensure clear roles and expectations for further development and maintenance of the IMS. **Status: Open.** VA's targeted completion date: December 2022.
6. The EHRM program management office ED should comply with the Federal Acquisition Regulation and issue guidance to accept deliverables not separately priced before invoice payment. **Status: Closed** 3/10/2023.

ACTIONS TAKEN BY VA, DOD, AND THE FEHRM IN RESPONSE TO RECS FROM JOINT AUDIT OF THE DOD AND THE VA EFFORTS TO ACHIEVE EHR INTEROPERABILITY MAY 5, 2022, 18-04227-91

1. We recommend that the deputy secretary of defense and deputy secretary of veterans affairs review the actions of the Federal Electronic Health Record Modernization Program Office (FEHRM) and direct the FEHRM to develop processes and procedures in accordance with the FEHRM charter and the National Defense Authorization Acts. **Status: Closed** 1/3/2023

We recommend that the director of the FEHRM, in coordination with the director of the Defense Health Agency; program executive director for EHRMI; and program manager for DoD Healthcare Management System Modernization:

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2. Determine the type of patient health care information that constitutes a complete patient EHR. **Status: Open.** FEHRM's targeted completion date: August 31, 2022.
 3. Develop and implement a plan for migrating legacy patient health care information needed for a patient's complete EHR once the FEHRM determines the health care data domains of patient health care information that constitutes a complete patient EHR. **Status: Open.** FEHRM's targeted completion date: August 31, 2022.
 4. Develop and implement a plan for creating interfaces that would allow medical devices to connect and transfer patient health care information to Cerner Millennium. **Status: Open.** FEHRM's targeted completion date: One year after resources have been approved and allocated, the FEHRM will develop a plan to create interfaces between medical devices and the federal EHR.

DEFICITS WITH METRICS FOLLOWING IMPLEMENTATION OF THE NEW EHR AT THE MANN-GRANDSTAFF VAMC JUNE 1, 2022, 21-03020-168

1. The deputy secretary completes an evaluation of gaps in new EHR metrics and takes action as warranted. **Status: Open.** VA's targeted completion date: October 2022.
2. The deputy secretary completes an evaluation of factors affecting the availability of metrics and takes action as warranted. **Status: Open.** VA's targeted completion date: October 2022.

SENIOR STAFF GAVE INACCURATE INFORMATION TO OIG REVIEWERS OF EHR TRAINING JULY 14, 2022, 21-02201-200

1. Issue a clarifying communication to the office's personnel that all staff have a right to speak directly and openly with OIG staff without fear of retaliation, and that, irrespective of any processes established to facilitate the flow of information, EHRM-IO personnel are encouraged to communicate directly with OIG staff when needed to proactively clarify requests and avoid confusion. **Status: Closed 9/7/2022.**
 2. Provide clear guidance that the office's personnel must provide timely, complete, and accurate responses to requests for all data or information without alteration, unless other formats are requested, with full disclosure of the methodology, any data limitations, or other relevant context. This includes prompt OIG access to entire datasets consistent with the Inspector General Act of 1978, as amended. **Status: Closed 9/7/2022.**
 3. Determine whether any administrative action should be taken with respect to the conduct or performance of the executive director of Change Management. **Status: Closed 8/2/2023.**
 4. Determine whether any administrative action should be taken with respect to the conduct or performance of Change Management's director for training strategy. **Status: Closed 8/15/2022.**
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THE NEW EHR'S UNKNOWN QUEUE CAUSED MULTIPLE EVENTS OF PATIENT HARM
JULY 14, 2022, 22-01137-204

1. The deputy secretary reviews the process that led to Cerner's failure to provide VA substantive information of the unknown queue and takes action as indicated. Status: Closed 2/13/2023.
2. The deputy secretary evaluates the unknown queue technology and mitigation process and takes action as indicated. Status: Closed 2/13/2023.

VA SHOULD ENSURE VETERANS' RECORDS IN THE NEW ELECTRONIC HEALTH SYSTEM ARE REVIEWED BEFORE DECIDING BENEFITS CLAIMS
AUGUST 30, 2023, 22-03806-162

1. The OIG recommended the under secretary for benefits conduct national refresher training on the EHRM National Process Memorandum and assess training effectiveness. Status: Open. VA's targeted completion date: March 2024.
2. The OIG recommended the under secretary for benefits consider updating VA Manual 21-4 to reflect that quality assurance measures include addressing failures to consider all VHA records as directed in the Adjudication Procedures Manual that are subject to an enterprise-wide search in the Compensation and Pension Records Interchange system whether or not directed to those records by the claimant and ensure staff are advised of the changes. Status: Closed 1/2/2024

THE ELECTRONIC HEALTH RECORD MODERNIZATION PROGRAM COULD STRENGTHEN ITS PROCESS FOR REVIEWING TASK ORDER PROGRESS
SEPTEMBER 6, 2023, 21-03290-159

No recommendations were issued in this Management Advisory Memorandum.

Prepared Statement of Mike Sicilia

Introduction:

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

Oracle is pleased to provide VA with a new EHR that includes a pharmacy capability which enables veterans to receive their medications in a timely manner.

When VA announced it would adopt the Cerner Millennium EHR, it made the decision to move from its legacy VistA EHR to a commercial off-the-shelf system. Utilizing a commercial system offers many benefits, chief among them that the Department of Defense (DoD) had made the decision to move to Millennium and this would enable service members and veterans to have a seamless health record from the beginning of their service through lifelong care at VA.

As a commercially developed system, Millennium did not account for every unique way that DoD or VA may provide care, so some adaptations necessarily have been required, though the goal is of course to limit customizations whenever possible. Pharmacy operations at VA is an example of an area where customizations have been required because unlike the commercial sector, VA operates as both the prescription ordering party and the dispensing party.

After the initial deployments, it became clear that the pharmacy system needed to be enhanced to better meet VA's needs. To that end, in August 2022, shortly after Oracle completed its acquisition of Cerner, VA contracted with us for seven enhancements that overall would adapt the pharmacy system to a more bidirectional system between VA providers placing prescription orders and VA pharmacists fulfilling and dispensing them. This month, we delivered the final of the seven enhancements, and they are all live for VA providers and pharmacists to use now, except for one that is undergoing additional testing and should be live soon (more information below). Oracle delivered these enhancements much faster than the delivery timeline anticipated by Cerner pre-acquisition.

We believe the enhanced pharmacy system Oracle has provided to VA presently is both safe and effective, having been built to VA's specifications and requirements. As with any healthcare technology system, there is a need for continuous improvements but that does not mean the system is not safe and effective in its current State. Oracle is committed to working with VA to address their unique needs. We intend to do that by continuing our work with VA on any new or additional enhancement requirements, by eventually updating the entire EHR, including pharmacy, to a modern stateless web application, by moving the EHR system to Oracle Cloud Infrastructure with VA's permission, and by continuing to work with VA throughout the reset period to identify workflows and other items that can be simplified or streamlined to improve the overall user and pharmacy experience.

Pharmacy Toplines:

Utilizing the new EHR at the five live VA Medical Centers (VAMC) and their associated facilities, veterans are receiving their outpatient prescriptions at the pharmacy window in an average of 25 minutes for Jan. 2024, which is below VA's 30-minute key performance metric.

On average more than 215,000 outpatient prescriptions are being filled each month. The current live sites do not have a backlog in filling prescriptions. Recent data from this month show that three of the five live sites have zero prescriptions waiting to be processed that are older than seven days. The two other live sites have an average of two prescriptions older than seven days.

We recognize that VA increased pharmacy staffing, and we continue to partner with VA to find efficiency opportunities while maintaining the benefits of the new capabilities. However, it also needs to be recognized that a comparison to productivity in pharmacy operations under VistA is not an apples-to-apples comparison because the new EHR includes additional safeguards that ensure patient safety and improved health outcomes for veterans. One example is clinical decision support that requires pharmacist intervention. Pharmacists need to stop, review the warning information on an allergy or drug interaction and mark as reviewed. Additional items that increase safety but also take pharmacist time are discussed below.

Prescriptions may also be filled by mail order, as directed by providers and pharmacists when making the order in the EHR. Since the first deployment in Oct. 2020, 4.3 million prescriptions have been filled through VA's Consolidated Mail Outpatient Pharmacy (CMOP). This number of prescriptions is in line with historic prescription fill volumes.

VA has initiated a significant effort to standardize pharmacy and other workflows during the reset period, and we are engaged with VA as advisors in that effort. Standardization ensures that all VA facilities adhere to best practices and evidence-based guidelines. This consistency in care delivery leads to improved patient outcomes and satisfaction. Oracle's pharmacy team works across all levels of VA pharmacy – national, VISN, and local – to support VA's mission in providing safe, effective, and timely medications to veterans. We view this as an ongoing partnership to standardize and optimize into a single EHR instance to improve quality of care.

As it relates to pharmacy, both standardizing workflows and ensuring training and communications to pharmacists about the latest updates will discourage use of workarounds and help with improving morale and satisfaction with the system. During a visit last week by VA and the Oracle team to the Lovell Federal Health Care Center in North Chicago, feedback from pharmacists was positive about the training and readiness for using the new pharmacy system.

Pharmacy Patient Safety Features:

The EHR module for entering pharmacy orders and managing drug therapy for a patient is referred to as Medication Manager Retail (MMR). MMR assists with basic tasks, such as identifying a patient, selecting drugs or other pharmacy products, and entering, reviewing, and modifying orders. MMR allows pharmacists to access a dynamic store of clinical, demographic, and therapeutic information about each patient without having to exit and go into a separate application. A provider or pharmacist can check a patient's health status and then implement an individualized drug therapy.

Relevant data sources for a patient are integrated into a single provider view in MMR. Pharmacists view VA and community care prescriptions in one queue rather than having to go to separate queues for each, as in VistA. Pharmacists see relevant clinical information and lab values – including renal function – face up during the entirety of medication evaluation and processing, a capability that informs proper prescription dosing that is not present in VistA without leaving the order to go to another screen, which is less efficient.

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

The results tab embedded within MMR provides a more comprehensive view of the lab results flowsheet. This means, for example, that a prescription for insulin for a veteran would be accompanied by the veteran's latest glucose and A1C lab readings directly in the results tab of the order.

An outpatient VA pharmacist has visibility, through the new EHR, of medications that were administered during a veteran's inpatient visit. The pharmacist can leverage this during the discharge process to ensure there are no medication gaps as the veteran transitions from inpatient to the next level of care.

Additionally, the new EHR allows for improved communication between VA pharmacists and 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 may lead to delay in the fulfillment of the prescription and additional workload for the VAMC pharmacist. This enhanced capability in the new EHR has been used more than 108,000 times since Oct. 2020.

The new EHR also includes enhanced decision support with the Opioid Advisor tool, which 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 27,000 modifications to opioid prescriptions since Oct. 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.

Finally, 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 7,000 times. This represents 7,000 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.

Pharmacy Updates and Enhancements:

VA has issued two primary Task Orders – Number 31 and Number 52 – for updates and enhancements to the pharmacy capability. In addition, Oracle regularly provides EHR system updates including for the pharmacy capability in the February and August scheduled Code Block upgrades. Since the Subcommittee's last pharmacy-focused hearing in May 2023, Code Block 9 was performed over the weekend of Aug. 26, 2023, and Code Block 10 upgrade was performed over the weekend of Feb. 10, 2024.

Oracle has instituted enhanced testing of updates to the system, including for pharmacy updates. For example, in addition to executing planned test scripts based on documented requirements, Oracle now partners with VA end users at the live sites to conduct exploratory testing, a method that is especially useful for uncovering edge cases and usability issues. This form of user-centric testing allows us to focus on how users will interact with the software and helps inform any required changes. Updates are not included in a Code Block upgrade until testing is satisfactory to both Oracle and VA (and DoD when applicable).

Significant updates and enhancements are described below according to Task Order.

Task Order 31: E-Rx Monitoring Filling (Block 8 – Feb. 2023)

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 (Live Dec. 2022)

This enhancement increases the release cadence for Multum content to move from monthly releases to weekly releases, allowing for increased delivery of drug content as it is updated.

Task Order 31: Three Drug Image (Block 11 – Aug. 2024)

This enhancement will provide drug metadata (round, scored, color, drug ID, imprint) in outpatient pharmacy workflows so that a pharmacy user can accurately identify medications. Recent modifications to VA's requirements have extended the timeline for this enhancement.

Task Order 31: Mobile Inventory Scanning (Block 9 – Aug. 2023)

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 52: Enhancement Number 1—Toggle Prescription Synonym Visibility (Block 8 – Feb. 2023)

This enhancement guides providers to order prescriptions or supplies based on what is formulary and fillable through VA outpatient or CMOP. The intent is to reduce re-work efforts needed by pharmacists and providers to adjust prescriptions after the initial order entry, which will mean less re-work if a local VA site cannot fill a prescription. This streamlined the number of prescriptions a provider sees by almost 30 percent to better provider and pharmacy experience in addition to increasing productivity.

Task Order 52: Enhancement Number 2—Optional Order Stop Date in MMR (Block 8 – Feb. 2023)

This enhancement allows ongoing medications for a patient to stay on the patient's active medication list even after the legal date has been met and regardless of whether a veteran's prescription was originally ordered within the EHR or from a community care provider. This ensures providers and pharmacists continue to have better visibility to a veteran's medications even when a new prescription is needed.

Task Order 52: Enhancement Number 3a—Display Legal Rx Expiration Date in Orders (Block 8 – Feb. 2023)

This enhancement gives visibility for providers when a prescription is no longer fillable because it is past the legal expiration date, which helps identify when a new prescription is needed and allows for more timely prescription renewals. It is not uncommon for a veteran to be taking multiple prescriptions and often double-digit prescriptions to meet their medical needs. During a provider visit with a veteran, the provider will conduct prescription management to re-order/refill all a veteran's medications to allow them to continue to receive supply from VA. Therefore, a legal expiration date of a prescription was needed as this information comes from VA pharmacy.

Task Order 52: Enhancement Number 3b/3c—Display Rx Dispensing Details in Power Orders (Block 10 – Feb. 2024, but functionality go-live date is pending)

This enhancement will update the provider's view when a prescription is ordered to reflect how prescriptions are dispensed by the pharmacy to the patient. This change will bring more visibility to situations when a pharmacy is using a different tablet size, for example, to fill a prescription (e.g., Lisinopril 20 mg tablet x 1 tab prescription filled with Lisinopril 10 mg tablet, x 2 tabs).

This enhancement was included in the recent Code Block 10 update; however, due to rigorous testing performed in the lead-up to the update, issues were discovered by VA and Oracle that have led to a decision not to make the functionality of the enhancement live yet. This decision is an example of the benefits of Oracle's more rigorous testing than what was done before, and it enables a solution that puts patient safety first so that issues are fixed before the functionality goes live to users. We are working with VA to resolve the remaining issues quickly so that the functionality may be enabled soon.

Task Order 52: Enhancement Number 4—Support mCDS Discontinue in MMR (Block 9—Aug. 2023)

This enhancement reduces the steps or number of clicks pharmacy staff need to take to discontinue duplicate prescriptions within the drug interaction checking (mCDS) alerts window.

Task Order 52: Enhancement Number 5—Enable Power Orders Renewal Action on MMR Prescriptions (Block 9 – Aug. 2023)

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

Task Order 52: Enhancement Number 6—Optional Pharmacist Verification for Pharmacy Technicians Refills (Block 9 – Aug. 2023)

This enhancement saves time for pharmacists by removing pharmacist verification requirements for refills initiated by pharmacy technicians.

Task Order 52: Enhancement Number 7—Request Refills from Power Chart to Outpatient Pharmacy (Block 10 – 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.

Task Order 52: Modification Number 6—Addresses (Block 10 – Feb. 2024)

This enhancement allows pharmacists to override the address validation status for an address that fails the United States Postal Service (USPS) validation.

Captain James A. Lovell Federal Health Care Center:

The Captain James A. Lovell Federal Health Care Center in North Chicago, Illinois, is an integrated federal health care facility operated by DoD and VA, combining medical care for both veterans and active-duty military personnel. It is scheduled to deploy the new EHR on March 9, 2024. Significant work has taken place throughout 2023 and into the present to prepare Lovell FHCC for this deployment of the new EHR.

Specifically, for pharmacy, Lovell FHCC will benefit by being the first site to deploy with the various updates and enhancements mentioned above. In addition, Oracle has spent considerable time understanding clinical operations at FHCC and working closely with VA, DoD, and FEHRM counterparts to work toward a successful deployment.

A team of Oracle pharmacists with previous VA and DoD experience executed the first pharmacist led pharmacy knowledge transfer series that covered the general utility of the new EHR and an in-person demonstration of inpatient and outpatient workflows ranging from basic order entry to adept queue management.

Weeklong sessions were conducted in November 2023 with the entire FHCC pharmacy operations staff to include pharmacists and pharmacy technicians. This approach extended beyond the usual super user engagement and separate end user engagement to ensure more staff gained clinical exposure in which the pharmacists leveraged their expertise to address situational based inquiries from the local staff.

Feedback from the local staff rated the presentations favorably. The local staff provided a 9.82/10 rating when encouraging future sites to have the opportunity to participate in similar sessions, and across the board, FHCC pharmacy operations staff reported feeling more comfortable with the EHR after the knowledge transfer series.

Forthcoming Report from the Office of the Inspector General:

We understand the VA's Office of Inspector General (IG) will be issuing a report focused on pharmacy operations in the near future. Oracle has not been (i) briefed by the IG on its report, (ii) provided the opportunity by the IG to comment on the report, or (iii) provided the opportunity to review the IG's testimony for this hearing prior to the due date of this written testimony.

Oracle's position has been and continues to be that if there is an issue with the EHR, we want to know about it immediately so that we can provide an update to alleviate it. If the IG identifies issues that have not already been addressed, we will be prepared to quickly address them.

Closing:

Oracle looks forward to continuing to provide VA with a pharmacy module in the new EHR that enables veterans to receive their medication when they need it and safely. Thank you.

