STATEMENT OF DEPUTY INSPECTOR GENERAL DAVID CASE
OFFICE OF INSPECTOR GENERAL, DEPARTMENT OF VETERANS AFFAIRS
BEFORE THE
U.S. SENATE COMMITTEE ON VETERANS' AFFAIRS
HEARING ON
THE DEPARTMENT OF VETERANS AFFAIRS ELECTRONIC HEALTH RECORD MODERNIZATION PROGRAM
July 20, 2022

Chairman Tester, Ranking Member Moran, and Committee members, thank you for the opportunity to discuss the Office of Inspector General's (OIG's) oversight of the Department of Veterans Affairs' electronic health record modernization (EHRM) program. The OIG recognizes the 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. Over the two-plus years that OIG staff have been repeatedly engaging with employees at the first deployment site—the Mann-Grandstaff VA Medical Center (VAMC) in Spokane, Washington—and other VA locations using the new EHR, we have seen an unwavering commitment to this transition while prioritizing the care of patients during the COVID-19 pandemic. Their challenges have been exacerbated, however, by the lack of prompt remediation of problems that the OIG and others have identified in numerous oversight reports published since April 2020.

The OIG published 14 reports addressing the EHRM program and system implementation between April 2020 and July 2022 with a total of 68 recommendations. The reports and their respective recommendations are detailed in the sections that follow. They are meant to help VA improve execution of the new system and support the provision of 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 as the new EHR system rolls out nationwide. Fully addressing OIG recommendations can also help minimize considerable cost escalations and delays in future site deployments. The OIG is extremely concerned about the six recommendations that have been open (not implemented or fully addressed) for longer than two years—with 24 total recommendations open for more than one year. While the OIG follows up with VA on open recommendations every 90 days, VA program officials can submit evidence of sustained progress or satisfaction of corrective actions at any time to facilitate closing recommendations.

As the following sections detail, since July 2021, the OIG began examining how the new system has been affecting users and patients. Most recently, the OIG determined that the new EHR system directed thousands of medical orders to an "unknown queue" that were not evident to the clinical and

administrative staff responsible for addressing them. The OIG also found that the Veterans Health Administration (VHA) determined the unknown queue created significant risk and caused harm to multiple veterans. As recently as June 2022, hundreds of orders remained in the unknown queue across VA sites implementing the new system. In another July 2022 report, the OIG found that the Office of Electronic Health Record Modernization's (OEHRM's) Change Management leaders exhibited a lack of care and due diligence that resulted in inaccurate information being submitted to the OIG regarding VHA user training on the new EHR system.[1] Had the OIG not discovered key data had been excluded, which inflated training pass rates, and that the evaluation plan submitted was actually still in "its infancy," it is likely that Congress and the public would have been misinformed about the state of VA's evaluation of the training program.

OIG staff collaborated with the Department of Defense (DoD) Office of Inspector General to examine weaknesses in VA and DoD's efforts to achieve interoperability of their systems to provide a complete EHR for veterans. That work highlighted the failure of the Federal Electronic Health Record Management (FEHRM) program office to execute its oversight and coordination responsibilities in accordance with its charter.

Also at the programmatic level, the OIG reported that VA has not executed a reliable, comprehensive schedule for full system implementation. Identified deficiencies could result in schedule delays and leave VA vulnerable to billions of dollars in cost overruns. Without that schedule, Congress and the public cannot rely on VA timeline projections for completing the work or be assured that the program will be completed within budget.

Three OIG reports released in March 2022 identified EHRM issues connected to medication management, care coordination, and the ticketing process used by staff to request help and resolve problems. A year after going live, Mann-Grandstaff VAMC was also found to be lacking key metrics from the EHR needed to manage organizational performance, patient safety, and access to quality care.

In November 2021, the OIG examined the experiences of employees using the EHR system at Mann-Grandstaff VAMC, as well as the patient appointment scheduling package at the Chalmers P. Wylie VA Ambulatory Care Center in Columbus, Ohio (Columbus clinic). Clinical and administrative staff at these locations expressed frustration with the significant system and process limitations that raised concerns about veterans' prompt access to quality care and the continuity of that care.

Previously, the OIG's oversight in 2020 and through July of 2021 focused on VA's preparation for the system's initial deployment at the Mann-Grandstaff VAMC and the condition of VA's physical and information technology (IT) infrastructure prior to system deployment.[2] Deficiencies the OIG detected

[1] OEHRM was subsequently replaced by the Electronic Health Record Modernization Integration Office (EHRM IO).
[2] "Physical infrastructure" refers to the underlying foundation that supports the system, such as electrical; cabling; and heating, ventilation, and air conditioning. "IT infrastructure" includes network components such as wide and local area networks, end-user devices (e.g., desktop and laptop computers, and monitors), and medical devices.

for the first deployment site revealed the need for prompt corrective measures as additional facilities were switching to the new EHR system. Yet many issues remained unresolved prior to additional deployments, particularly problems with the users' and veterans' experience that can affect patient care and safety. Further, the existing physical and IT infrastructure was inadequate for the new system, and pertinent life cycle cost estimates were unreliable and underestimated possibly by about $5 billion.

2022 EHRM OVERSIGHT REPORTS

The OIG has released eight reports in 2022 covering a range of implementation and oversight concerns.

Senior Staff Gave Inaccurate Information to OIG Reviewers of EHR Training (July 2022 Report)

Between September 2020 and April 2021, the OIG experienced significant challenges in receiving timely, complete, and accurate information during a healthcare review focused on employee training on the new EHR. While the OIG did publish a detailed report on the training program in June 2021, discussed below, OIG staff had significant concerns about potential misconduct by two of OEHRM's Change Management leaders regarding their responses to requests for information about the plan to evaluate the training's effectiveness and data related to the post-training proficiency tests taken by employees. The OIG subsequently initiated an administrative investigation.[3] While the investigation did not find that the two Change Management leaders intentionally sought to mislead OIG healthcare inspectors, the OIG found that their lack of due care and diligence resulted in inaccurate information being submitted to OIG staff.

Specifically, Change Management's then executive director and the director for training strategy

- presented documentation to OIG staff that described a training evaluation plan, without disclosing that the action items had not been fully implemented and that no training evaluation plan had been reviewed or approved;
- delayed production of underlying proficiency check data and instead provided one slide with three summary statistics with significant errors that resulted in doubling the reported proficiency check pass rate from 44 to 89 percent, and later inaccurately explained the difference as the result of removing a relatively small number of data outliers;
- failed to recognize red flags and confirm accuracy before reporting the revised results to OIG staff, which would likely have shown that the contractors who produced the information for the OIG had removed *all failing proficiency scores* from the calculations; and

[3] VA OIG, *Senior Staff Gave Inaccurate Information to OIG Reviewers of Electronic Health Record Training*, July 14, 2022.

- did not disclose that the training proficiency results reported to the OIG excluded outliers and were calculated in response to the request, instead of resulting from the submitted training evaluation plan when participants' training was completed.

Had the OIG relied on the information provided, Congress and the public would have been misled as to how trainees had performed in the tests. The culture of accountability the Secretary and Deputy Secretary are promoting by mandating training on engaging with the OIG and other measures is critical; however, this report underscores the need for leaders overseeing the EHRM program to reinforce those values and the requirement for timeliness, completeness, and accuracy in all responses to OIG requests for information. The OIG made four recommendations, found in appendix A, and all are open.[4] Two recommendations pertain to the need for open and direct staff-level communications with the OIG to resolve questions and to provide appropriate and prompt responses. The two other recommendations ask VA to examine if administrative action should be taken concerning the conduct or performance of the senior leaders.[5]

The New EHR's Unknown Queue Caused Multiple Events of Patient Harm (July 2022 Report)

This review looked at one aspect of the question of whether the new EHR resulted in any patient harm.[6] In May 2021, after VHA identified several patient safety concerns, a VHA National Center for Patient Safety team went to Mann-Grandstaff VAMC with their work continuing through the year. In late 2021, the team drafted a report and held a Safety Summit where they ranked dozens of safety concerns based on severity, identifying the "unknown queue" as one of the most severe.

Information about harm to patients due to the new EHR system was presented to the VA Deputy Secretary in November 2021. In December 2021, the Deputy Secretary forwarded information about harms due to the unknown queue to the executive director of EHRM IO. From October 24, 2020, through May 8, 2022, VHA identified 1,134 total patient safety events related to the new EHR. VHA's analysis identified one catastrophic patient harm (death or major permanent loss of function) and two major patient harm cases (permanent lessening of bodily functioning), one of which was related to the unknown queue.[7]

---

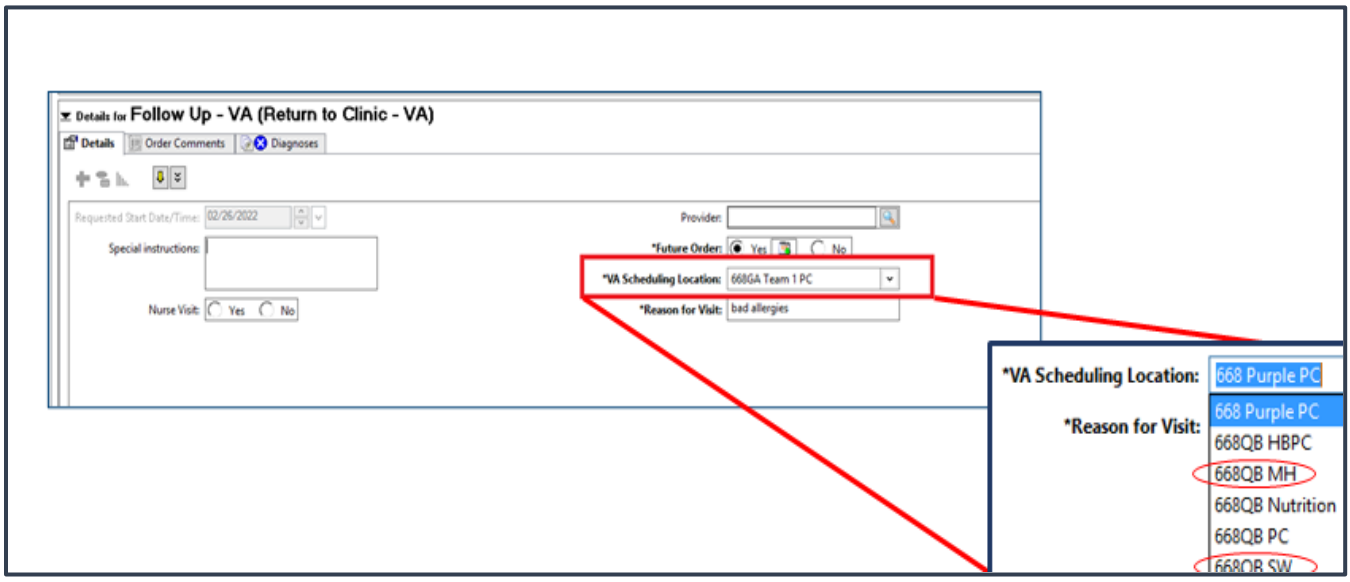
[4] The appendices list all reports discussed in this statement in publication order from most recent to the earliest EHRM-related release. The OIG requests updates on the status of recommendations every 90 days from VA. See www.va.gov/oig/recommendation-dashboard.asp.

[5] As an independent oversight authority, the OIG cannot mandate administrative action or dictate a specific outcome.

[6] VA OIG, *The New Electronic Health Record's Unknown Queue Caused Multiple Events of Patient Harm*, July 14, 2022.

[7] "Catastrophic harm is defined by VA as "death or major permanent loss of function (sensory, motor, physiologic, or intellectual) **not related to the natural course of the patient's illness or underlying condition** (i.e., acts of commission or omission)." Major harm is defined by VA as "permanent lessening of bodily functioning (sensory, motor, physiologic, or intellectual) **not related to the natural course of the patient's illness or underlying condition** (i.e., acts of commission or omission)." [bolding not added by the OIG]

The intent of the unknown queue is to capture orders entered by providers that the new EHR cannot deliver to the intended location. The design of the new EHR allowed providers to select locations from a drop-down menu that, depending on the specific order, would not be recognized as a "match" by the system. This "mismatch" would ultimately send orders to an unknown queue and not to the requested service location to initiate the ordered care. Notably, the new EHR did not alert the healthcare providers that the order was not delivered to the intended location.



The circled items in the figure above illustrate how locations included in the drop-down list were not matched and, if chosen, would send the order to the unknown queue. Orders from care providers began populating the unknown queue immediately after the facility went live. VHA staff had to re-input the orders after discovering the issue, expending many hours of labor at this point and then during the clinical reviews that assessed the harm patients may have suffered. Cerner did take steps with VA to mitigate the problem at Mann-Grandstaff VAMC by removing unmapped locations in September 2021.[8] As of February 2022, an alert is sent if a provider creates an order with an unmapped location. However, prior to March 2022, VHA could not generate a report of unknown queue orders itself. Cerner acknowledged that the unknown queue's ongoing risk would require mitigation at future go-live sites, noting the need to continuously reinforce the guidance on managing the queue.

The OIG found that Cerner did not inform VA end users of the unknown queue or provide guidance to address the unknown queue in advance of going live with the new EHR. A Cerner vice president, identified by the company's general counsel as a subject matter expert on the unknown queue, similarly reported having no knowledge that VA was told about it before going live. Following the OIG's

[8] Cerner Corporation was acquired by Oracle Corporation on June 7, 2022, and is now called Oracle Cerner; however, this statement will refer to the entity as "Cerner."

transmittal of the draft report to VA in June 2022, Cerner provided EHRM IO with documentation that asserted a VA leader approved the use of the unknown queue in January 2020. However, that VA leader and their supervisor told OIG staff they had no awareness of the unknown queue prior to going live.

The OIG found that the unknown queue created significant patient risks and caused harm to multiple patients. VHA itself assessed the risk as major severity, frequently occurring, and very difficult to detect and initiated a clinical review in June 2021 to ensure orders were acted on and to assess patients for harm. The clinical reviewers conducted 1,286 assessments and identified 148 adverse events (with an additional one later found by VHA to be a major harm, bringing the total to 149) for patients:

- Major harm: 2
- Moderate harm: 52
- Minor harm: 95

As an example of a major harm, a provider entered a psychiatric care order for a patient experiencing homelessness and identified as at-risk for suicide. The new EHR sent the order to the unknown queue. The patient was not scheduled for follow-up care and later contacted the Veterans Crisis Line reporting a razor in hand and a plan to take their own life. The patient was hospitalized for psychiatric care.

The OIG has concerns with the effectiveness of the plan to mitigate the unknown queue's safety risk. Facility leaders reported using the mitigation process to monitor and manage the queue but shared that steps in the process could still lead to orders remaining in the queue. In June 2022, when the OIG met with VA leaders to discuss this report, VA said that work to address the unknown queue was considered complete and that, on average, there were 28 orders in the unknown queue report. However, on that day, the OIG generated a report showing 522 total orders across the six VA facilities using the new EHR. The OIG made two recommendations, found in appendix B, and both are open.

Deficits with Metrics Following Implementation of the New EHR at the Mann-Grandstaff VAMC (June 2022 Report)

This report examines the availability and use of EHR performance metrics more than a year after VA's go-live date at Mann-Grandstaff VAMC.[9] The OIG conducted this review because of the potential for vulnerabilities in data reporting and analysis following the new EHR deployment that are used to inform medical facility leaders' decisions. The OIG found that metrics no longer available due to the new EHR transition impaired the facility's ability to measure and act on issues of organizational performance, quality of care and patient safety, and access to health care.

After going live, Mann-Grandstaff VAMC staff used work-arounds to mitigate the metrics gap. The staff shared with the OIG that doing so created a "tremendous" increase in additional workload, at times

[9] VA OIG, *Deficits with Metrics Following Implementation of the New Electronic Health Record at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, June 1, 2022.

requiring numerous hours or days to prepare just one metrics report. Despite time-intensive workarounds and concerns with metrics accuracy, a facility leader shared that their service chiefs had been forced at times to "provide their best estimates" to inform decisions, such as facility staffing and patient discharges, because of the gaps in metrics. The OIG remains concerned that, despite the concerted efforts of facility staff to use work-arounds to manage gaps in the new EHR's metrics, the deficits may negatively affect organizational performance, quality of care and patient safety, and prompt access to health care.

The OIG identified multiple factors contributing to the significant gap in metrics available in the new EHR system. Challenges with the new EHR's metrics included the following factors:

- Cerner failed to deliver metrics reports.
- New EHR metrics could not be assessed prior to going live.
- New EHR metrics' usefulness was impaired.
- There was inadequate training regarding new EHR metrics.

VHA-generated metrics using new EHR data also created the following challenges:

- VHA resources were insufficient.
- The metrics were not validated and were therefore unavailable.
- VHA changed which metrics the facility was required to use.

The OIG determined that deficiencies related to the new EHR's metrics and challenges with VHA-generated metrics using new EHR data impaired the facility's access to and use of metrics. The OIG is concerned that further deployment of the new EHR in VHA without addressing the gap in metrics available to the facility will affect Mann-Grandstaff VAMC and future sites' ability to use metrics effectively. The OIG made two recommendations, found in appendix C, and both are open.

Joint Audit of the DoD and the VA Efforts to Achieve EHR Interoperability (May 2022 Report)

Staff from several OIG divisions worked on a joint project led by the DoD Office of Inspector General.[10] The project assessed internal controls and compliance with legal requirements, as well as actions by DoD, VA, and their joint Federal Electronic Health Record Modernization (FEHRM) program office to help ensure that healthcare providers serving veterans can access a complete healthcare record. The joint audit found that the agencies took some actions to achieve the level of

[10] DoD OIG and VA OIG, *Joint Audit of the Department of Defense and the Department of Veterans Affairs Efforts to Achieve Electronic Health Record System Interoperability*, May 5, 2022.

interoperability between DoD, VA, and external care providers specified by Congress in the National Defense Authorization Act of 2020 (NDAA). Challenges remain, however.

Specifically, the audit found that VA and DoD did not consistently migrate patient healthcare information from the legacy system into the new EHR to create a single, complete patient health record. The OIGs found that DoD and VA have separate processes for which information is brought forward into the new EHR. To access clinical information that hasn't been migrated from the old system to the new system, users have been instructed to use the Joint Longitudinal Viewer. Having providers use this work-around to obtain information does not meet NDAA requirements that healthcare providers access and exchange patient healthcare information without additional intervention.

Second, the DoD and VA did not develop interfaces from all medical devices to the new EHR so that patient healthcare information will automatically upload to the system from those devices. For example, some medical devices, such as some blood pressure cuffs and IV pumps, did not have set national healthcare data standards and still require the departments to develop effective interfaces.

Finally, the agencies did not ensure that users were granted access to the system for only the information needed to perform their duties. Cerner's EHR system limits access to patient healthcare information based on the provider's user roles. However, the user roles were not always commensurate with the healthcare provider's assigned duties. DoD user role coordinators granted some healthcare providers more access to the EHR system than was needed to perform their duties. According to the NDAA, to achieve interoperability, Cerner Millennium must have the ability to allow only relevant users, those that require access to perform their duties, access to healthcare information. Furthermore, other rules require that healthcare organizations limit the use of protected health information, such as patient EHRs, to the minimum access necessary for users to perform their official duties.

One contributing factor to interoperability problems was the failure of FEHRM program office officials to develop and implement a plan to achieve all FY 2020 NDAA requirements and to take an active role in managing the program's success, as authorized by the FEHRM's charter. Because the FEHRM program office limited its role, DoD and VA took separate actions to migrate patient healthcare information, develop interfaces, and grant user access to the EHR system.

The OIGs made two recommendations, found in appendix D, and both remain open.

The EHRM Program Did Not Fully Meet the Standards for a High-Quality, Reliable Schedule (April 2022 Report)

To implement the program successfully and within budget, it is imperative that VA develop a reliable integrated master schedule (IMS).[11] Government Accountability Office (GAO) guidance, which OEHRM adopted, states that a high-quality, reliable schedule should be comprehensive, credible, well-constructed, and controlled. The IMS is designed to cover the entire required scope of work—of both government staff and contractors—needed to complete the program. VA should use it as a road map to completion, to monitor progress, to help identify potential problems and track their resolution, and to promote accountability for assigned tasks. While not every task for a 10-year project can be accounted for early on, there are strategies to create a tailorable, comprehensive schedule to minimize the risk of delays, dropped activities (some of which are prerequisites for others), and budget overruns.

The audit evaluated whether the IMS met GAO scheduling standards. Then, it assessed whether OEHRM complied with regulations requiring IMS submissions to be "accepted" (that is, reviewed for compliance with contract requirements) before payment. The OIG reviewed all IMS-related invoices paid through August 30, 2021, and found that for one of the two task orders, OEHRM did not accept deliverables until after VA paid related invoices, which means VA cannot ensure submissions meet quality standards. In one instance, VA paid the invoice about 10 months before accepting the deliverable. This is a violation of acquisition regulations requiring acceptance before payment.

VA Did Not Have a High-Quality, Reliable IMS

The OIG found that neither the overall IMS nor five of its underlying individual project schedules fully met GAO standards adopted by OEHRM for a high-quality, reliable schedule. VA failed to meet fully the following scheduling standards:

- **Comprehensive.** The IMS should reflect the entire scope of program work in some level of detail to plan how the system deployment will be executed. However, the OIG determined that the IMS did not capture all work for the program's duration and was missing VHA and Office of Information and Technology (OIT) activities.
- **Credible.** A credible IMS should include a complete schedule risk analysis, which can give a level of confidence in meeting a program's completion date. However, OEHRM did not conduct a schedule risk analysis for the IMS.
- **Well-constructed.** A "critical path" determines the earliest date a program can be completed to help managers examine the effects of activity slippages, but no overall IMS critical path was created.

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

- **Controlled.** A controlled IMS should include a baseline schedule, used for managing the program and conducting trend analyses over time to assess program performance. However, OEHRM's program baseline only covered events through April 2020. While OEHRM has some notional (conceptual) baseline dates within project schedules, they do not give a comprehensive timeline. This is needed to have a full understanding of the plan and what constitutes successful program completion.

The OIG identified several root causes for OEHRM's failures:

- **Did not adequately coordinate with various offices.** VHA and OIT leaders said OEHRM officials did not collaborate with them during development; thus, the schedules the audit team reviewed did not include all work to be performed by these entities.
- **Did not conduct a schedule risk analysis because it lacked procedures.** Despite the importance of completing this analysis, OEHRM did not have procedures in place on when and how to conduct it.
- **Focused on near-term deployment of the system at the initial operating sites.** OEHRM only required development of site-specific schedules after task orders for those sites were awarded. Applying that strategy, VA would not have a high-quality, reliable IMS until it starts deploying the system at the last sites, which are planned to go live in FY 2028.
- **Did not enforce its own scheduling standards or have tools in place to assess compliance.** While OEHRM's schedule management plan stresses compliance with GAO guidance, task orders to Cerner do not require the IMS to align with them. Additionally, OEHRM's schedule management plan requires staff to use specific software to assess whether EHRM project schedules comply with GAO standards. However, a tool was not available from March 2020 to June 2021.
- **Lacked consistent guidance on roles, resulting in confusion over the assignment of IMS development and documenting how work was broken down.** Internal planning and contract documents inconsistently assigned responsibilities for developing and maintaining the program's work breakdown structure (WBS) and the IMS. The WBS defines all work needed to complete the program. Guidance inconsistently assigned these responsibilities to VA or one of its contractors—Booz Allen Hamilton, Inc., or Cerner, leading to confusion.[12] Cerner accepted responsibility for the WBS and, in July 2020, worked with VA to create it. While Cerner is responsible for developing the IMS, VA should ensure contract requirements are consistent with internal guidance.
- **Did not clearly define IMS contract requirements.** Cerner was contractually required to develop and maintain an IMS for the program under VA's task orders; however, the task orders did not clearly establish a timeline for when a complete IMS would be developed. Without a clear timeline,

[12] Booz Allen Hamilton, Inc. staff support EHRM activities. Their work included gathering input from VA administrations or offices to develop schedules for VA activities.

OEHRM required Cerner to develop site-specific project schedules as task orders were awarded. Following this process, future work not yet on task order would be unaccounted for in the IMS.

VA has a responsibility to ensure there is a complete IMS that meets scheduling standards. After completing a 12-week strategic review in July 2021, VA committed to conducting an enterprise-wide assessment to help identify gaps at all VA medical centers. This effort would allow VA to develop a reliable schedule by using the information learned to better define the scope of future work needed. It would also help address some of the concerns identified by the OIG.

VA needs a high-quality, reliable IMS to strengthen the credibility of the program's timeline. Without one, VA can neither demonstrate how slippages will affect the overall timeline nor assure stakeholders that the reported timeline is realistic and achievable. Any schedule delays that extend the program beyond 10 years are also likely to result in billions of dollars in cost overruns. The OIG estimated the average cost per year of a schedule delay is potentially about $1.95 billion.

For this report, the OIG made six recommendations, found in appendix E, and all are open.

A trilogy of reports released in 2022 responded to many complaints submitted to the OIG hotline and requests from congressional offices following the new EHR's deployment to Mann-Grandstaff VAMC. OIG healthcare inspections staff began work on two efforts to address several priority concerns—medication management and patient care coordination. During this work, the OIG team identified further challenges with the "trouble" or "help" ticketing process for system users to submit concerns, and the OIG team determined that some previously identified deficiencies were still unresolved. Consequently, the healthcare oversight team started a third effort to examine why problems were not addressed and to highlight the underlying causal factors. When VA responded to the three reports in early March 2022—nearly 18 months after going live in October 2020, VA actions to resolve issues were limited. The OIG identified 37 issues that were unresolved after the OIG completed its inspection in June 2021, but only eight were resolved by March of 2022.

Medication Management Deficiencies after the New EHR Go-Live at the Mann-Grandstaff VAMC (March 2022 Report)

The first in the trilogy of healthcare inspections focused on medication management for patients subject to the new EHR at the initial operating site.[13] This includes tracking and managing lists of medication, ordering, and promptly getting them to patients. Ensuring VA patients receive the correct medications in a timely manner is critical, particularly as many patients are older with numerous medical conditions treated with multiple medications. EHRs can improve clinical decision-making and minimize human error, but the risk of harm increases when systems have poor usability, workflows, or data inputs.

[13] 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.

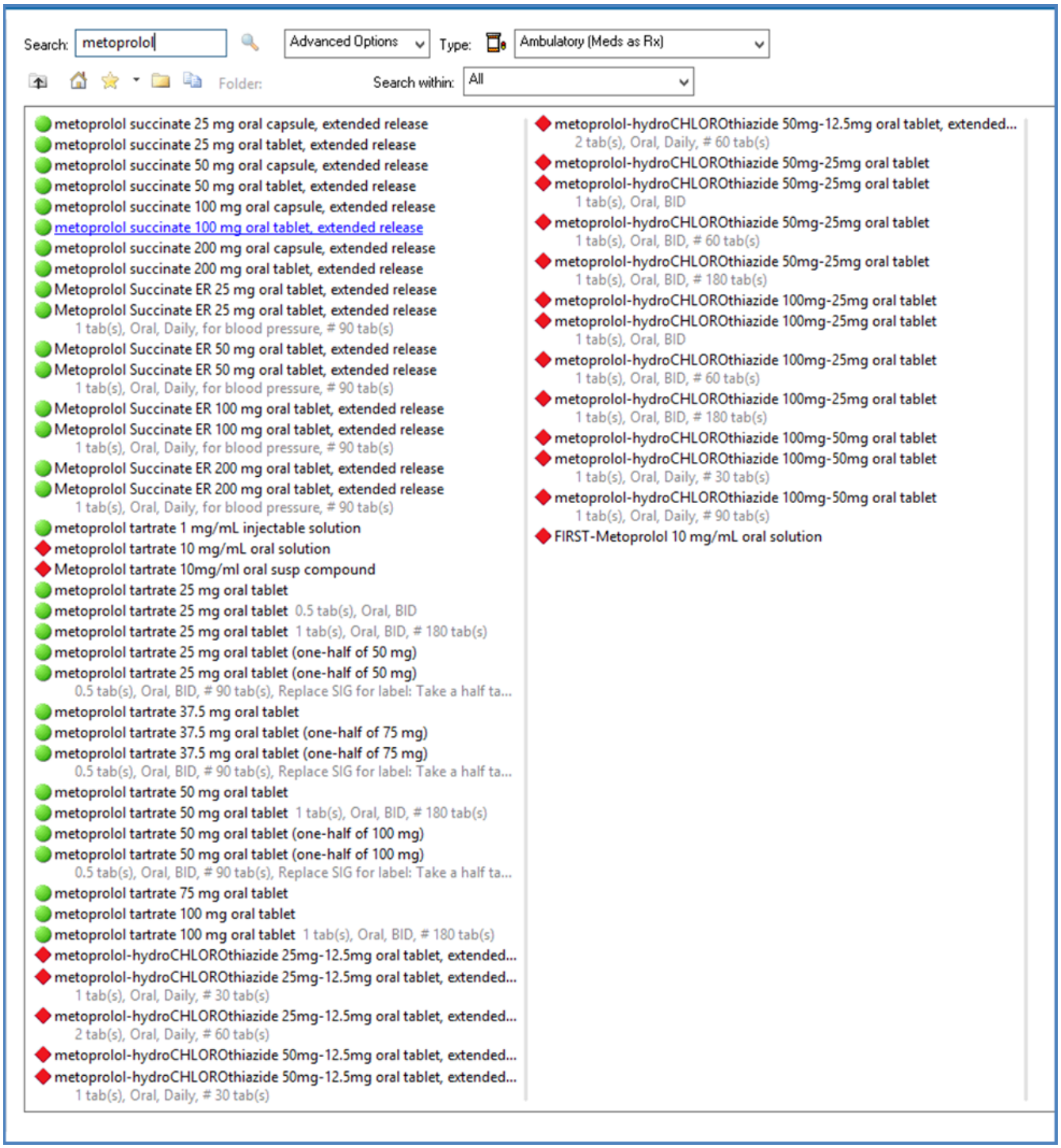
The problems with medication management and prescriptions within the new EHR became apparent shortly after going live. A facility staff member reported a daily average of 100 patients showed up at Mann-Grandstaff VAMC for help with prescriptions even during the pandemic—five times more than before going live.

The OIG grouped the various complaints regarding medication management into three categories: data migration, medication orders, and medication reconciliation.

Data Migration

For this report, data migration focused on transferring patient information from VA's legacy EHR to the new system. Identified deficient areas related to patient contact information, patient medication lists, and formulary lists that included medications unavailable at the facility and supplies.

- **Patient Contact Information**: Prior to going live, VA migrated contact information and clinical data for approximately 88,000 veterans to the new EHR. The OIG found that outdated DoD data overwrote VHA's patient contact information, such as name, address, telephone number, and email address when data were migrated to the new EHR. Consequently, VA patients were delayed in receiving medications through the mail order pharmacy system.
- **Medication Lists**: The OIG substantiated that medication lists, migrated as "free text" per VHA's request, contained inaccuracies. Because medication lists did not import properly, care providers used work-arounds, including manual reentry to generate accurate medication lists. Staff described this process as "overwhelming" and time-consuming.
- **Medication Formulary**: The new EHR's formulary included many medications not available at Mann-Grandstaff or on VA's national formulary. Consequently, care providers unknowingly selected nonformulary or unavailable supplies. These selections increased risks for errors, potentially raised costs for VA, and added work for care providers and pharmacy staff. The figure below shows the new EHR's available options for a single medication commonly used to control blood pressure or heart rate. It shows how one medication can have dozens of entries of drug formulations and strength options, frustrating providers and increasing the risk of error.



Medication Orders

The OIG substantiated 10 of 12 allegations related to the mismanagement of medication orders. The identified problems affect every aspect of the process from orders failing to process to patients'

recurring future medication orders being automatically discontinued without notice to providers. Staff could not track prescription orders for patients. The OIG also received varied accounts on the functionality of the new EHR's Prescription Drug Monitoring Program (PDMP) process. The PDMP is a state-controlled substance monitoring program. The PDMP provides an important check on drug diversion and substance misuse. The common theme among these accounts, however, was that the multiple-step work-arounds staff developed to address deficiencies increased risks for human error.

Summary of Medication Order Allegations about the New EHR and Findings

Medication Orders	Allegations	OIG Determination	Status
Future Order Discontinuance	The new EHR discontinued future medication orders written by providers.	Substantiated	Unresolved
	Discontinued future medication orders required providers to write "stat" or place immediate orders, causing medication delays for patients.	Substantiated	Unresolved
	Discontinued future medication orders led absent providers to arrange for colleagues to write orders for recurring medications, creating inefficiencies and increasing risks for orders being missed and possible patient safety issues.	Substantiated	Unresolved
Unauthorized Orders Placed	Registered nurses could order medications without provider approval.	Substantiated	Unresolved
Outpatient Orders Not Processed	Pharmacy staff did not process outpatient orders.	Not Substantiated	Not Applicable
	Some outpatient orders failed to process and appeared missing to nonpharmacy staff.	Substantiated	Unresolved
Lack of Notification	Notifications were not sent to prescribing providers and pharmacists about future recurring injectable medication orders that were discontinued or outpatient medication orders that did not process.	Substantiated	Unresolved
Confusing Alerts	Medication alerts were confusing, and providers did not receive training on interpreting them.	Substantiated	Unresolved
Prescription Status Unclear	Providers were unable to assess the status of a filled prescription order.	Substantiated	Unresolved
Lack of Tracking for Mailed Controlled Substances	Pharmacy staff were unable to consistently track mailed controlled substance prescriptions.	Not Substantiated	Not Applicable
	Nonpharmacy staff could not consistently track mailed controlled substance prescriptions.	Substantiated	Unresolved
PDMP	After completing a PDMP query, providers' notes were not automatically populated in alignment with VHA policy, requiring additional work for providers.	Substantiated	Unresolved

Medication Reconciliation

The OIG substantiated that inaccurate medication lists in the new EHR challenged staff conducting reconciliations. This critical process identifies and resolves any medication discrepancies found in an EHR with the information supplied by the patient or caregiver. Accurate medication lists guide providers' treatment decisions, and inaccuracies could have significant health consequences for a patient. Staff familiar with the new EHR said medication reconciliation is a complex, time-consuming, multistep process requiring an in-depth understanding of the new system. The OIG observed that poor training led to a knowledge gap that contributed to errors and helped explain varying user experiences.

Summary of Medication Reconciliation Allegations and Findings

Medication Reconciliation	Allegations	OIG Determination	Status
Medication List Discontinuity	Staff had to update medication lists at every visit because prior medication information revisions did not carry over.	Substantiated	Unresolved
	Medications disappeared from reconciled medication lists, and lists were inaccurate after reconciliation.	Substantiated	Unresolved
	Staff manually entered medication lists post-reconciliation, which increased risk for error and safety concerns.	Substantiated	Unresolved
	Medication reconciliation required a significant amount of time to complete per patient.	Substantiated	Unresolved
Medication List Inaccuracies	Discontinued and expired medications were not viewable during reconciliation, creating a patient safety issue.	Substantiated	Unresolved
	Medications administered in a clinic did not appear on medication lists, creating a patient safety issue.	Substantiated	Unresolved
Medication Lists Unsuited for Patient Use	Medication lists were not patient-friendly.	Substantiated	Unresolved

The two recommendations can be found in appendix F of this statement. VA concurred with the first recommendation, which requires extensive software modifications that VA has indicated will take over a year from now to implement. The second recommendation called for the Deputy Secretary to ensure medication management issues related to the new EHR identified after the inspection be reported to the OIG for further analysis. VA did not concur with this recommendation, citing the difficulty of a continuous, open reporting requirement to the OIG. This is not an open-ended recommendation, however, and would be closed after VA demonstrates an effective and sustainable process to identify and address patient safety issues. VA already must provide this information to the OIG regardless of whether VA concurs with the recommendation, and the OIG will continue this oversight work.

Care Coordination Deficiencies after the New EHR Go-Live at the Mann-Grandstaff VAMC (March 2022 Report)

The second report in the trilogy addressed an expansive list of allegations categorized as care coordination concerns.[14] Care coordination involves numerous EHR functions that facilitate how care is synchronized both among healthcare providers and directly with the patient. As an example of these challenges, the VAMC's coordinator for the new EHR's patient portal reported a backlog after the go-live of over 300 voicemail messages from patients unable to access the portal. During the pandemic, the portal was a central means for patients to communicate with providers.

The OIG further sorted the allegations into eight categories. Each had multiple deficiencies:

1. **Patient Record Flags:** Patient record flags denoting patients at high risk for suicide and disruptive behavior in the legacy EHR failed to activate for some Mann-Grandstaff VAMC patients. Some identified concerns about patient record flag functionality in the new EHR stemmed from system design, while others related to deficits in training on the new EHR's workflow. The flags are not as obvious in the new system as they were in the legacy EHR. In some new EHR views, staff had to navigate multiple steps to find information about the flag and relevant precautions. Of the six substantiated allegations, only two remained unresolved: the visibility of the flag and national-level data sharing of active record flags for patients at high risk for suicide.
2. **Data Migration:** As previously discussed, deficiencies were found in the migration of patient information, such as incorrect patient names, patients' gender, and contact information. VA reported that discussions continued between VA and DoD regarding updates to enterprise system–level business rules needed to improve interoperability and ensure accurate data migration in the face of policy differences between VA and DoD.
3. **Scheduling Process:** Initial allegations received by the OIG cited delays in scheduling and inadequate appointment information and reminders in the new EHR. Reminders to veterans and caregivers did not always specify if appointments were by telephone rather than in-person, resulting in some patients traveling to the facility for telephone appointments. The OIG was also alerted to problems with the new self-scheduling tool that resulted in Washington State patients inadvertently self-scheduling appointments at the Columbus clinic. Of the five related substantiated allegations, four remained unresolved, particularly related to delays in scheduling primary care appointments, the type of appointment, and the information contained on appointment reminders.
4. **VA Video Connect:** This VHA telehealth service technology enables veterans to meet virtually with VA healthcare providers from anywhere, using encrypted video. The OIG substantiated some allegations that appointments failed due to broken links, incorrect time zones, and links being sent to

[14] VA OIG, *Care Coordination Deficiencies after the New Electronic Health Record Go-Live at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, March 17, 2022.

outdated email addresses. VA needed to completely resolve only the last allegation, as some veterans were still having to contact DoD to have their contact information updated.

5. **Referral Management:** Deficiencies in implementing the Ambulatory Referral Management function decreased care providers' ability to manage patients' referrals in the provider's own clinical service, particularly in the behavioral health department, and with other outpatient services in VHA. These breakdowns could lead to delays and affect patient experiences at VHA more generally. For example, providers had no easy way to determine if a referral had been acted on. Certain aspects of system configuration, workflow errors, interoperability deficits, and insufficient training contributed to staffs' difficulties with handling referrals. The three substantiated issues remained unresolved.
6. **Laboratory Orders:** The OIG was alerted to "disappearing" laboratory orders that never reached lab personnel. The system configurations and training deficits were factors in these failures. Like the prior blood pressure medicine example, ordering providers were shown a confusing array of options. Additionally, staff were challenged in tracking the orders, and many results were delayed in being returned. These issues created more opportunities for human error as staff used work-arounds to get results that informed care delivery. These three substantiated issues were unresolved.
7. **Patient Portal and Secure Messaging:** When the new EHR went live, many patients could not access the portal, affecting access to tools that supported coordination of care, such as secure messaging and online prescription refills. VA staff reported that system changes completed by OIT resolved some causes of this disruption, while other resolutions were in progress.
8. **Documentation Processes:** While the OIG did not substantiate all allegations received related to documentation process problems, facility staff reported experiencing challenges in effectively navigating and using some of the new EHR capabilities. Insufficient end-user training and misperceptions about certain new EHR functionalities appeared to be the sources of the difficulties. VA started using a new method, the financial identification number (FIN), to document workload associated with care provided between visits, which historically VHA had not recorded. This required numerous steps for providers and created additional work and confusion. Another example involves a configuration issue in which not all International Classification of Disease 10 diagnostic codes were available in the new EHR, affecting providers' ability to correctly code patient diagnoses. Of the three substantiated allegations, the FIN and diagnostic codes, were unresolved.

For this report, the OIG made one recommendation, located in appendix G, and it remains open.

Ticket Process Concerns and Underlying Factors Contributing to Medication Management and Care Coordination Deficiencies (March 2022 Report)

The OIG issued this third report in the trilogy to provide an analysis of the persistent issues with the ticket process used for reporting problems and requesting assistance at Mann-Grandstaff, including

identifying the underlying causal factors.[15] From the October 2020 go-live date through March 31, 2021, new EHR end users placed over 38,700 tickets. OIG staff gained access to the EHR help ticket system for analysis and identified key terms for each allegation and checked and cross-checked 4,094 tickets that were related to the issues discussed in the two reports.

Ticket Process Challenges

The OIG team reviewed ticket comments to understand facility staffs' frustration with getting fixes and changes. VA and VHA leaders also identified potential patient safety and related concerns with the new EHR ticketing process. Although VA initiated a strategic review to address these concerns, there were limited process changes. The ticket process challenges the OIG found include the following:

- **Cerner's service desk support staff were not able to view and replicate reported issues.** While Cerner had a mirror version of the DoD EHR, a mirror version of the Mann-Grandstaff VAMC's EHR was not built. OEHRM staff were frustrated that when Cerner service desk support staff could not reproduce a reported issue they closed the ticket, potentially delaying the problem's resolution.[16]
- **The same Cerner staff closed tickets before resolving the issues.** Closing tickets without resolving the concerns could result in patient safety issues as well as the propagation of similar issues at future implementation sites. Facility staff also reported feeling a lack of support.
- **Ticket status was not communicated to end users.** As part of VA's agreement with Cerner, end users were to be notified and given the opportunity to review whether the proposed or implemented resolution addressed the reported issue before Cerner closed the ticket. Mann-Grandstaff VAMC staff reported during 2021 that Cerner's service desk staff were unhelpful or rude. The OIG found that these challenges contributed to tickets not being fully resolved and low staff morale.
- **Mann-Grandstaff VAMC staff sometimes created work-arounds instead of placing tickets.** Due to ticket process challenges, staff across clinical service lines at Mann-Grandstaff VAMC began creating work-arounds to accomplish necessary tasks, which can increase patient safety risks, result in inefficiencies, and bypass security or safeguard measures.

This report validated deficient ticket processes identified earlier in VA's "Electronic Health Record Comprehensive Lessons Learned" report released in July 2021.[17] While VA had identified proposed measures to monitor these process changes, their report stated that the measures had not been finalized and were under review.

---

[15] VA OIG, *Ticket Process Concerns and Underlying Factors Contributing to Deficiencies after the New Electronic Health Record Go-Live at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, March 17, 2022.

[16] In the response VA gave to the OIG shortly before publication, VA wrote that Cerner service desk support staff had given access to the EHR's production version. The OIG will review VA's evidence during the follow-up process to determine if that is the case.

[17] VA, *Electronic Health Record Modernization Comprehensive Lessons Learned Report*, November 2021. The report was initially released in July 2021 and updated in November 2021.

Underlying Factors of Substantiated Allegations in Companion Inspections

To probe deeper into the allegations of this report's two companion inspections regarding medication management and care coordination issues, the inspection team reviewed the prior substantiated allegations and identified five underlying factors:

1. **EHR Usability Problems.** Poor usability has been linked to increased patient safety risks, inefficiencies, and care provider frustration and stress. Among other issues, the OIG found that the user interface was not optimized for workflows, inefficient navigation hampered staff, patient data were in different sections of the EHR, and restrictive definitions of user roles assignments that defined employees' capabilities in the system limited the information staff could see.
2. **Training Deficits.** The OIG found insufficient training content, support, and an approach to training that did not provide staff with the underlying reasons for the actions they should take.
3. **Interoperability Challenges.** Staff must have access to information needed to perform their work from within and across VHA. This was hampered by the data migration issues previously discussed, the failure of information to transfer to the Consolidated Mail Outpatient Pharmacy, and information not properly transferring to national-level VHA databases.
4. **Fixes and Refinement Needs.** The OIG identified that some substantiated allegations were unresolved and required fixes after going live, as well as refinements to address errors in system workflows and changes to components of the new EHR. For example, staff were initially unable to view patients' service-connected conditions noted by the Veterans Benefits Administration from the new EHR, which led to an inability to document these conditions for healthcare delivery purposes.
5. **Problem Resolution Process Challenges.** Successful EHR implementation requires effective pathways for resolving identified problems, and as discussed in this trilogy of reports, the ticket process for resolving questions and concerns had several deficiencies.

For this report, the OIG made three recommendations, found in appendix H, and all are open.

2021 EHRM OVERSIGHT REPORTS

In 2021, the OIG published four EHRM-focused reports. The November report assessed the implementation of the EHR system's patient scheduling component at the Columbus clinic and Mann-Grandstaff VAMC. Two reports (published in May and July) resulted from audits that examined cost estimates for needed physical and IT-related infrastructure upgrades. For the new EHR system to operate as intended, VHA facilities need these infrastructure upgrades, but they are generally funded from different sources. Because the submitting agency did not account for costs from other VA components' budgets, some cost estimates were not included in mandated reports to Congress. Transparent and reliable cost estimates are critical for Congress to make informed budgetary and investment decisions. VA senior leaders also depend on these cost estimates to plan program budgets, approve acquisitions, and monitor program execution. In another July report, the OIG inspected the

development and delivery of training content to the new EHR's users and assessed post-training staff proficiency. These reports are summarized below.

New Patient Scheduling System Needs Improvement as VA Expands Its Implementation (November 2021 Report)

This report assessed the implementation of the EHR system's patient scheduling component at the Columbus clinic and Mann-Grandstaff VAMC.[18] The OIG found VHA and OEHRM did not fully resolve known significant limitations in the scheduling system, leading to reduced effectiveness and increased risk of patient care delays. The problems identified in this report have persisted through the OIG's 2022 reports, such as schedulers developing work-arounds for unresolved issues and problematic data migrated from legacy systems. OEHRM leaders did not provide scheduling staff with adequate chances to identify limitations in the new scheduling system before implementation, nor did leaders assess Cerner's compliance with contract terms for handling trouble tickets. The OIG made eight recommendations, which can be found in appendix I, and all remain open.

Unreliable IT Infrastructure Cost Estimates (July 2021 Report)

This audit examined VA's estimates of IT infrastructure upgrades.[19] Of the EHRM program's estimated $16.1 billion cost, VA targeted $4.3 billion for IT infrastructure upgrades. However, the OIG found this unreliable, and a lack of documentation hampered determining the extent of the estimate's inaccuracy. The OIG also found VA did not report to Congress other IT upgrade costs of about $2.5 billion because OEHRM did not include costs from other VA components. Many of the deficiencies and root causes noted are also found in the OIG's physical infrastructure report discussed below. That said, the OIG did note that VA was improving its estimating methodology, and it would be reasonable to assume more reliable future estimates.

The OIG also found OEHRM was not updating the cost estimates provided to Congress during the audit period. In February 2020, OEHRM knew of changes to FY 2021 costs requiring revisions to expected future years' costs but did not update the estimates in any of the four subsequent reports to Congress. VA did make changes to projected costs in the November 2021 report to Congress, but given VA was still developing an independent cost estimate, there was no certainty those updates were reliable.

All six recommendations to the executive director of OEHRM listed in appendix J remain open and a few rely on VA to conduct the independent cost estimate, which has yet to be completed.

---

[18] VA OIG, *New Patient Scheduling System Needs Improvement as VA Expands Its Implementation*, November 10, 2021.

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

Deficiencies in Reporting Reliable Physical Infrastructure Cost Estimates (May 2021 Report)

This audit assessed whether VA developed and reported reliable physical infrastructure upgrade cost estimates for the new EHR.[20] VHA medical facilities need significant physical infrastructure upgrades, such as electrical work, cabling, heating, and cooling to deploy the new EHR. The audit found VHA's cost estimates were not reliable and did not meet standards for being comprehensive, well documented, accurate, and credible. The audit team projected two VHA cost estimates were potentially underestimated by as much as $1 billion and $2.6 billion, in part due to facility needs not being well-defined. The estimates also omitted escalation and some cabling costs and were based on low estimates.

VA also failed to report all program costs to Congress in accordance with statutory requirements. OEHRM did not include cost estimates for upgrading physical infrastructure in the program's life cycle cost estimates. While VHA provided OEHRM with those costs estimates for physical infrastructure upgrade costs as early as June 2019, OEHRM did not include them in congressional life cycle cost estimate reports. OEHRM said it did not disclose these estimates because the upgrades were outside its funding responsibility, but this is contrary to statute and VA and GAO guidance requiring a life cycle cost estimate include all costs, regardless of source.[21] VA concurred with the OIG's five recommendations for corrective action, and further confirmed in its comments that the costs associated with these upgrades will be transparently disclosed to Congress. Four recommendations are still open, as shown in appendix K of this statement.

Training Deficiencies for VA's New EHR System at the Mann-Grandstaff VAMC (July 2021 Report)

The OIG reviewed the training given to Mann-Grandstaff VAMC staff.[22] Similar to findings DoD had for training on Military Health System GENESIS, which is essentially the EHR system VA purchased, the OIG found problems. Even before deployment, the healthcare inspection team identified governance challenges as VHA did not have a defined role in decision-making or oversight related to training activities. In reviewing the training, the OIG found training content, delivery, and assessment failures.

The inspection team reviewed the training content on the software and the more than 900 new workflows. New workflows result in changes to how end users perform their jobs, such as scheduling

---

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

[21] The Veterans Benefits and Transition Act of 2018 defines the EHRM program as "any activities … to procure or implement an electronic health or medical record system to replace" the existing electronic health record system and "any contracts or agreements entered into by [VA] to carry out, support, or analyze" these activities. Because physical infrastructure upgrades are necessary for system implementation, those costs should be included in LCCEs under the statute's plain language.

[22] VA OIG, *Training Deficiencies with VA's New Electronic Health Record System at the Mann-Grandstaff VA Medical Center in Spokane, Washington*, July 8, 2021.

consults (referrals) or how a provider performs an exam. The OIG found the classroom training and supplemental material were insufficient. Facility leaders and staff told the OIG that training did not prepare them for going live with the new system, teach them how to apply what they learned to their work, or explain the meaning behind the process of which buttons to push ("buttonology"). The VA OEHRM director of Change Management corroborated the classroom training's inadequacy.

The OIG also identified four aspects of training delivery that may have negatively affected the new EHR system's use: (1) insufficient time for training, (2) limitations with the training domain (a close facsimile for users' practice), (3) challenges with user role assignments (these dictate the capabilities on which an employee is trained), and (4) gaps in training support. OEHRM's then director of Change Management said not having contact with facility staff for five months due to the pandemic had the biggest impact on training but acknowledged that staff understood they would have a practice EHR and that "it was a miss from a communication standpoint." Facility leaders and staff raised concerns with Cerner classroom trainers, including their lack of clinical knowledge, EHR expertise, and an inability to address questions.

Finally, the OIG found OEHRM failed to effectively evaluate training. Even in early 2021 (five months after go-live), OEHRM said the evaluation plan was "immature" and "in its infancy" when there had been plans to assess training immediately after students' completion. As discussed above, the OIG conducted an administrative investigation into the inaccurate and incomplete data OEHRM provided after OIG staff requested "any and all data" from the training evaluation plan.

The OIG made 11 recommendations, which can be found in appendix L, and eight are still open.

2020 EHRM OVERSIGHT REPORTS

The reports above build on the foundation of two April 2020 OIG reports about EHRM readiness prior to the original go-live date at Mann-Grandstaff VAMC. The first examined the potential impact of VA's transition to the new EHR on patients' access to care and the many mitigations needed to handle the initially unavailable capabilities.[23] The OIG also found the facility was not staffed adequately for the transition, and the work-around for the electronic prescription refill process presented significant concerns as it could have affected patients' ability to fill critical medications. These medication management concerns were borne out in the OIG's April 2022 report. The OIG made eight recommendations in this report, of which three—related to staffing and minimizing the need for risk-mitigation strategies—remain open. The recommendations can be found in appendix M.

The second report focused on the gaps in VA's efforts to update Mann-Grandstaff VAMC's physical and IT infrastructure—a precursor to the 2021 audits that evaluated VA's associated cost estimates.[24]

---

[23] VA OIG, *Review of Access to Care and Capabilities during VA's Transition to a New Electronic Health Record at the Mann-Grandstaff VA Medical Center Spokane Washington*, April 27, 2020.

[24] VA OIG, *Deficiencies in Infrastructure Readiness for Deploying VA's New Electronic Health Record System*, April 27, 2020.

The OIG found VA did not meet its own timelines to complete the infrastructure upgrades needed to sustain the new system and that VA lacked internal oversight to track the facility's readiness. VA lacked comprehensive site assessments to determine a realistic go-live date, requisite specifications, appropriate monitoring mechanisms, and adequate staffing. VA committed to an aggressive—but apparently unrealistic—initial deployment date in March 2020 without having the necessary information about the facility's infrastructure. The OIG made eight recommendations, listed in appendix N. Three of the recommendations—related to ensuring program requirements for physical infrastructure are met, staff vacancies are filled, and physical security assessments are completed—remain open.

CONCLUSION

The Committee and VA have focused tremendous resources to deploy the new EHR system. The OIG's work highlighted in this statement reveals there are still considerable challenges for VA to handle as it begins to scale up the new EHR's deployment and use. The OIG is committed to providing thorough and practical recommendations to help VA deploy the new EHR efficiently and in a manner that improves veterans' and staffs' experiences. While each report has specific recommendations intended to improve EHRM, there are broader concerns that many of the recommendations reflect. A primary concern is governance: Is the right structure in place to identify potential issues to prevent their occurrence, to prioritize those issues that may affect prompt quality care to patients, and to resolve those issues before additional deployments? Another key concern is transparency. Is there transparency between EHRM IO the facilities, VHA, OIT, and Cerner? Full and candid information sharing will help build confidence that issues are identified, prioritized, and adequately addressed. As VA moves toward deployment in more complex facilities and potentially on an accelerating schedule, proper governance and transparency will be necessary to get it right. Failures in these areas risk cascading problems that put the entire program in jeopardy. 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 Tester, this concludes my statement. I would be happy to answer any questions you or other members may have.

APPENDIX A - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *SENIOR STAFF GAVE INACCURATE INFORMATION TO OIG REVIEWERS OF EHR TRAINING* – JULY 14, 2022

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: Open.
VA's targeted completion date: July 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: Open.
VA's targeted completion date: October 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: Open.
VA's targeted completion date: July 2022.

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: Open.
VA's targeted completion date: July 2022.

APPENDIX B - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *THE NEW EHR'S UNKNOWN QUEUE CAUSED MULTIPLE EVENTS OF PATIENT HARM* – JULY 14, 2022

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: Open.
VA's targeted completion date: October 2022.

2. The deputy secretary evaluates the unknown queue technology and mitigation process and takes action as indicated.
Status: Open.
VA's targeted completion date: October 2022.

APPENDIX C - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *DEFICITS WITH METRICS FOLLOWING IMPLEMENTATION OF THE NEW EHR AT THE MANN-GRANDSTAFF VAMC* – JUNE 1, 2022

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.

APPENDIX D - ACTIONS TAKEN BY VA, DOD, AND THE FEHRM IN RESPONSE TO RECOMMENDATIONS FROM *JOINT AUDIT OF THE DOD AND THE VA EFFORTS TO ACHIEVE EHR INTEROPERABILITY* – MAY 5, 2022

1. We recommend that the deputy secretary of defense and deputy secretary of veterans affairs review the actions of the FEHRM and direct the FEHRM to develop processes and procedures in accordance with the FEHRM charter and the National Defense Authorization Acts.
Status: Open.
VA's targeted completion date: September 30, 2022.
DoD's targeted completion date: None specified.
2. 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:
   a. Determine the type of patient health care information that constitutes a complete patient EHR.

Status: Open.
FEHRM's targeted completion date: August 31, 2022.
   b. 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.
   c. 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.

APPENDIX E - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *THE EHRM PROGRAM DID NOT FULLY MEET THE STANDARDS FOR A HIGH QUALITY, RELIABLE SCHEDULE* – APRIL 25, 2022

1. The EHRM program management office executive director should comply with internal guidance and ensure the development of an 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 executive director 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 executive director 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 executive director 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 WBS and IMS.
Status: Open.
VA's targeted completion date: November 2022.

5. The EHRM program management office executive director 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 executive director should comply with the Federal Acquisition Regulation and issue guidance to accept deliverables not separately priced before invoice payment.
Status: Open.
VA's targeted completion date: May 2022.

APPENDIX F - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *MEDICATION MANAGEMENT DEFICIENCIES AFTER THE NEW EHR GO-LIVE AT THE MANN-GRANDSTAFF VAMC* – MARCH 17, 2022

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: Open.
VA's targeted completion date: None as VA non-concurred with the recommendation.

APPENDIX G - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *CARE COORDINATION DEFICIENCIES AFTER THE NEW EHR GO-LIVE AT THE MANN-GRANDSTAFF VAMC* – MARCH 17, 2022

1. The deputy secretary ensures that substantiated and unresolved allegations noted in this report are reviewed and addressed.
Status: Open.
VA's targeted completion date: May 2022.

APPENDIX H - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *TICKET PROCESS CONCERNS AND UNDERLYING FACTORS CONTRIBUTING TO DEFICIENCIES AFTER THE NEW EHR GO-LIVE AT THE MANN-GRANDSTAFF VAMC* – MARCH 17, 2022

1. The deputy secretary completes an evaluation of the new EHR problem resolution processes and takes action as warranted.
Status: Open.
VA's targeted completion date: March 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: Open.
VA's targeted completion date: May 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.

APPENDIX I - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *NEW PATIENT SCHEDULING SYSTEM NEEDS IMPROVEMENT AS VA EXPANDS ITS IMPLEMENTATION* – NOVEMBER 10, 2021

1. The USH coordinates with the OEHRM executive director to continue to make improvements to the scheduling training as needed to address feedback from schedulers.
Status: Open.
VA's targeted completion date: July 2022.

2. The USH coordinates with the OEHRM executive director 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: Open.
VA's targeted completion date: April 2022.

3. The USH coordinates with the OEHRM executive director to issue guidance to facility staff on which date fields in the new system schedulers should use to measure patient wait times.
Status: Open.
VA's targeted completion date: July 2022.

4. The USH coordinates with the OEHRM executive director to develop a mechanism to track and then monitor all tickets related to the new scheduling system, and then ensure OEHRM evaluates whether Cerner effectively resolved the tickets within the timeliness metrics established in the contract.
Status: Open.
VA's targeted completion date: July 2022.

5. The USH coordinates with the OEHRM executive director to develop a strategy to identify and resolve additional scheduling issues in a timely manner as OEHRM deploys the new EHR at future facilities.
Status: Open.
VA's targeted completion date: July 2022.

6. The USH coordinates with the OEHRM executive director 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: Open.

7. The USH coordinates with the OEHRM executive director to evaluate whether patients received care within the time frames directed by VHA policy when scheduled through the new system.
Status: Open.

8. The OIG recommends that the VA OEHRM executive director provide guidance to schedulers to consistently address system limitations until problems are resolved.
Status: Open.
VA's targeted completion date: August 2022.

APPENDIX J - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *UNRELIABLE INFORMATION TECHNOLOGY INFRASTRUCTURE COST ESTIMATES FOR THE EHRM PROGRAM* – JULY 7, 2021

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: Open.

VA's targeted completion date: This is part of the strategic review and will be provided as soon as information is available.

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.

APPENDIX K – ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *DEFICIENCIES IN REPORTING RELIABLE PHYSICAL INFRASTRUCTURE COST ESTIMATES FOR THE EHRM PROGRAM* – MAY 25, 2021

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: Open.
VA's targeted completion date: 9 – 12 months from contract start.

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: Open.
VA's targeted completion date: 9 – 12 months from contract start.

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: Open.
VA's targeted completion date: 9 – 12 months from contract start.

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 January 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.

APPENDIX L - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *TRAINING DEFICIENCIES WITH VA'S NEW EHR SYSTEM AT THE MANN-GRANDSTAFF VAMC* – JULY 8, 2021

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: Open.
VA's targeted completion date: September 2021.

2. The deputy secretary establishes an EHR training domain that ensures close proximation to the production environment and is readily available to all end users during and following training.
Status: Open.
VA's targeted completion date: January 2022.

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: Open.
VA's targeted completion date: January 2022.

4. The deputy secretary ensures the user role assignment process addresses identified facility leaders and staff concerns.

Status: Open.
VA's targeted completion date: January 2022.

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: Open.
VA's targeted completion date: January 2022.

6. The deputy secretary evaluates the process of super user selection and takes action as indicated.
Status: Closed February 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: Open.
VA's targeted completion date: January 2022.

8. The deputy secretary oversees the revision of an OEHRM training evaluation plan and ensures implementation of stated objectives.
Status: Open.
VA's targeted completion date: January 2022.

9. The deputy secretary reviews the EHRM governance structure and takes action as indicated to ensure the USH's role in directing and prioritizing EHRM efforts is commensurate with VHA's role in providing safe patient care.
Status: Closed February 1, 2022.

10. The USH establishes guidelines and training to capture new EHR-related patient complaints, including patient advocacy.
Status: Open.
VA's targeted completion date: January 2022.

11. The USH ensures an assessment of employee morale following implementation of a new EHR and takes action as indicated.
Status: Closed February 1, 2022.

APPENDIX M - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *REVIEW OF ACCESS TO CARE AND CAPABILITIES DURING VA'S TRANSITION TO A NEW EHR SYSTEM AT THE MANN-GRANDSTAFF VAMC* – APRIL 27, 2020

1. The under secretary for health (USH), in conjunction with OEHRM 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 IOC 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: Open
VA's targeted completion date: Initial response at IOC go-live; revised versions at subsequent go-live dates.

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 January 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 veterans integrated service network (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 July 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 October 16, 2020

7. The Mann-Grandstaff VAMC Director ensures that community care consults are managed through go-live to ensure accuracy, completeness, and to avoid the need for manual reentry after go-live.
Status: Closed September 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 September 22, 2021.

APPENDIX N - ACTIONS TAKEN BY VA IN RESPONSE TO OIG RECOMMENDATIONS FROM *DEFICIENCIES IN INFRASTRUCTURE READINESS FOR DEPLOYING VA'S NEW EHR SYSTEM* – APRIL 27, 2020

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 October 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 October 1, 2020.

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 September 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 July 16, 2021.

5. The executive director of OEHRM should evaluate physical infrastructure for consistency with OEHRM requirements and monitor completion of those evaluations.
Status: Open.
VA's targeted completion date: March 2021.

6. The executive director of OEHRM should fill infrastructure-readiness team vacancies until optimal staffing levels are attained.
Status: Open.
VA's targeted completion date: March 2021.

7.The executive director of OEHRM should ensure physical security assessments are completed and addressed at future EHR deployment sites.
Status: Open.
VA's targeted completion date: April 2020.

8. The Mann-Grandstaff VAMC director should ensure all access points to physical infrastructure are secured and inaccessible to unauthorized individuals
Status: Closed October 1, 2020.