



# 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  
U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON VETERANS' AFFAIRS  
*HEARING ON*

NEXT STEPS: EVALUATING PLANS FOR THE CONTINUATION OF THE DEPARTMENT OF  
VETERANS AFFAIRS ELECTRONIC HEALTH RECORD MODERNIZATION PROGRAM

*April 26, 2022*

Chairman Mrvan, Ranking Member Rosendale, and Subcommittee 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 more than two 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, we have seen an unwavering commitment to transitioning to a new EHR system while continuing to prioritize the care of patients during the COVID-19 pandemic.

The OIG's EHRM program oversight in 2020 and through July of 2021 primarily focused on VA's preparation for the system's initial deployment at the Mann-Grandstaff VAMC (including an inspection of the quality of user training) and the condition of VA's physical and information technology (IT) infrastructure prior to system implementation. As discussed more fully below, deficiencies the OIG identified for the first deployment site revealed corrective measures that should be addressed as additional facilities switch to the new EHR system. Problems with the users' and veterans' experience were also evident. Similarly, the infrastructure needed for facilities was deficient, and both the physical and IT infrastructure cost estimates were unreliable and significantly underestimated.

The current phase of the OIG's oversight, which began in November 2021, shifted from VA preparation to the impacts on system users and patients. For example, multiple OIG teams 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 shared with OIG personnel their frustration about the significant system and process limitations that raised concerns about the continuity of and prompt access to quality patient care.

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The OIG also found that VA has not accurately executed a reliable and comprehensive schedule for full system implementation, revealing deficiencies that could result in schedule delays and leave VA vulnerable to billions of dollars in potential cost overruns.

OIG staff have repeatedly found VA's estimates unreliable and incomplete for upgrades and infrastructure costs, a lack of transparency due to inadequate reporting to Congress, stove-piped governance with decision-making that has not adequately engaged Veterans Health Administration (VHA) personnel who will use the system, and deficient processes for transparently and promptly responding to concerns raised by veterans and VHA end users. The 58 recommendations from the OIG's 10 reports published between April 2020 and April 2022 and detailed below are meant to help VA improve its implementation and healthcare delivery. Failure to implement these recommendations can lead to considerable cost escalations, delays in future site deployments, and risks to patient safety and quality care as the new EHR system rolls out nationwide.

## **BACKGROUND**

The OIG's mission is to conduct meaningful independent oversight of VA programs and operations to help VA ensure that eligible veterans receive access to quality health care, benefits, and other services in a timely manner, as well as make certain that taxpayer dollars are appropriately spent. The OIG began its oversight of the EHRM program early in its development because of its tremendous cost, scale, and potential effects on patient care. In addition, prior efforts to achieve interoperability between the Department of Defense (DoD) and VA electronic healthcare records, such as the Joint Longitudinal Viewer (formerly known as Janus and the Joint Legacy Viewer) and the integrated Electronic Health Record system did not achieve seamless interoperability between VA and DoD. Since 2000, the OIG has identified VA's overall information management as a "major management challenge" because VA has not always properly planned, overseen, and implemented updates to its critical IT investments.<sup>1</sup>

Regarding the new system's beginnings, former VA Secretary David Shulkin signed a Determination and Findings on June 1, 2017, authorizing VA to issue a solicitation directly to Cerner to acquire the EHR system being deployed by DoD. VHA and what was then the program office, the Office of Electronic Health Record Modernization (OEHRM), first implemented the new patient scheduling component separate from the full EHR system at the Columbus clinic in August 2020. Ultimately, the new EHR system went live at Mann-Grandstaff VAMC, its affiliated facilities, and the West Consolidated Patient Account Center on October 24, 2020, for clinical and administrative work after a delay during the start of the COVID-19 pandemic. Subsequently, in 2021, VA reorganized the program management function, renaming it the Electronic Health Record Modernization Integration Office (EHRM IO). That office is overseeing the deployment of the new EHR system to the second facility, the

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<sup>1</sup> Department of Veterans Affairs, "[Inspector General's VA Management and Performance Challenges](#)," Fiscal Year (FY) 2021 Agency Financial Report, sec. III, (2021). The OIG reports annually on VA's major management challenges.

Jonathan M. Wainwright VA Medical Center in Walla Walla, Washington, in March 2022. Presently, the rollout's completion is projected for fiscal year (FY) 2028.<sup>2</sup> VA had reported EHRM's cost at \$16 billion over the 10-year effort, but VA is reevaluating costs following two OIG audits in 2021.

## OIG 2020 OVERSIGHT REPORTS

The OIG published two reports about the EHRM effort on April 27, 2020. The first examined the potential impact of VA's transition to the new EHR system on patients' access to care and its initially available capabilities.<sup>3</sup> The OIG estimated for the initial go-live date that the facility would need to enact as many as 84 distinct mitigation plans for 62 unavailable functions that were deemed either moderate or high risk for being unavailable at go-live. The OIG found that the Mann-Grandstaff VAMC lacked adequate staffing to navigate the strains of the transition and that the efforts to mitigate known risks for going live were inadequate. This presented a significant risk to patient safety and quality care. The work-around for the electronic prescription refill process alone presented significant concerns as it could have affected patients' ability to fill critical medications. The concerns about medication management were borne out in an OIG April 2022 report (discussed more fully below). The OIG made eight recommendations in the 2020 report, of which three remain open related to staff resourcing to facilities and minimizing the need for risk mitigation strategies.<sup>4</sup> The recommendations' text and status can be found in [appendix A](#) of this statement, as well as on the OIG website's recommendations dashboard.<sup>5</sup>

The second report focused on the gaps in VA's efforts to update the Mann-Grandstaff VAMC's physical and IT infrastructure to support the new system.<sup>6</sup> The OIG found that VA did not meet its own timelines to complete critical physical and IT infrastructure upgrades at the facility needed to sustain the new system.<sup>7</sup> Infrastructure upgrades were not completed at the facility in a timely manner because VA lacked comprehensive site assessments to determine a realistic go-live date, requisite specifications and 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

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<sup>2</sup> Hearing Update on VA's Electronic Health Record Modernization Implementation Before the Subcommittee on Military Construction, Veterans Affairs, and Related Agencies, House Committee on Appropriations, 117th Cong., (October 21, 2021) (Statement of VA Deputy Secretary Donald Remy).

<sup>3</sup> 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.

<sup>4</sup> The OIG requests updates on the status of recommendations published in all oversight reports every 90 days from VA. All recommendations made to OEHRM are now being responded to by the EHRM IO.

<sup>5</sup> See [www.va.gov/oig/recommendation-dashboard.asp](http://www.va.gov/oig/recommendation-dashboard.asp).

<sup>6</sup> VA OIG, [Deficiencies in Infrastructure Readiness for Deploying VA's New Electronic Health Record System](#), April 27, 2020.

<sup>7</sup> "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.

about the facility's infrastructure. VA also lacked internal oversight to effectively track infrastructure readiness at the facility. The OIG made eight recommendations, listed in [appendix B](#), for corrective action, of which three are open related to ensuring program requirements for physical infrastructure are met, staff vacancies are filled, and physical security assessments are completed.

## **2021 EHRM OVERSIGHT REPORTS**

In 2021, the OIG published four reports on the EHRM program. Two resulted from audits that separately examined cost estimates for needed physical and IT-related infrastructure upgrades. For the new EHR system to operate as intended, VHA facilities need both types of infrastructure upgrades, but they are generally funded from different sources. Consequently, different entities are responsible for cost-estimating, and VA did not include some cost estimates in mandated reports to Congress on the EHRM program. 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.

For the third report, the OIG inspected the development and delivery of training content to users of the new EHR and assessed post-training staff proficiency. The fourth report assessed the implementation of the EHR system's patient scheduling component at the Columbus clinic and Mann-Grandstaff VAMC.

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

This audit assessed if VA developed and reported reliable physical infrastructure upgrade cost estimates for the new EHR system.<sup>8</sup> VHA medical facilities need significant physical infrastructure upgrades, such as electrical work, cabling, heating, and cooling to successfully deploy the new EHR system. The audit found that the cost estimates developed by VHA 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. This was due in part to facility needs not being well-defined early. The estimates also omitted escalation and some cabling upgrade costs and were based on low estimates at the initial operating sites.

VA also failed to report all program costs to Congress in accordance with statutory requirements. Specifically, OEHRM did not include cost estimates for upgrading physical infrastructure in the program's life cycle cost estimates in congressionally mandated reports. Although VHA provided OEHRM with those costs estimates for physical infrastructure upgrade costs as early as June 2019, OEHRM did not include them in life cycle cost estimate reports to Congress. OEHRM stated it did not disclose these estimates because the upgrades were outside OEHRM's funding responsibility, but this is contrary to statute and both VA and Government Accountability Office (GAO) guidance that require a

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<sup>8</sup> VA OIG, [Deficiencies in Reporting Reliable Physical Infrastructure Cost Estimates for the Electronic Health Record Modernization Program](#), May 25, 2021.

life cycle cost estimate include all costs, regardless of funding.<sup>9</sup> 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 C](#) of this statement.

### **Unreliable IT Infrastructure Cost Estimates (July 2021 Report)**

The second audit examined VA's estimates of IT infrastructure upgrades.<sup>10</sup> Many of the deficiencies and root causes noted in the OIG's May 2021 physical infrastructure report were also found in this audit. Of the EHRM program's previously estimated \$16.1 billion cost, VA targeted \$4.3 billion for distinct IT infrastructure upgrades. However, the OIG found this unreliable, and a lack of complete documentation made it difficult to determine 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 other VA components would bear. 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 that OEHRM was not updating the cost estimates it provided to Congress during the audit period. In February 2020, OEHRM knew of changes to FY 2021 costs requiring revisions to expected annual costs for future years but did not update the life cycle cost estimate in any of the four subsequent congressionally mandated reports. VA did make changes to projected costs in the report to Congress submitted in November 2021, but given that VA was still working to develop an independent cost estimate, there was no certainty those updated amounts were reliable.

All six recommendations to the executive director of OEHRM are listed in [appendix D](#). All remain open, and a few rely on VA to conduct the independent cost estimate, which has yet to be completed.

### **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.<sup>11</sup> 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.

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<sup>9</sup> 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.

<sup>10</sup> VA OIG, [Unreliable Information Technology Infrastructure Cost Estimates for the Electronic Health Record Modernization Program](#), July 7, 2021.

<sup>11</sup> 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.

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 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 (so-called “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 of the program for users’ practice), (3) challenges with user role assignments (these dictate what capabilities on which an employee is trained), and (4) gaps in training support. OEHRM’s director of change management opined that not having contact with facility staff for five months due to the COVID-19 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 identified concerns with Cerner classroom trainers, including their lack of clinical knowledge, EHR expertise, and an inability to address questions.

Finally, the OIG found the OEHRM failed to effectively evaluate training. Even in early 2021 (five months after go-live), the director of change management described the evaluation plan as “immature” and “in its infancy” when there had been plans to assess it immediately after students’ completion. The OIG requested “any and all data” from OEHRM’s training evaluation plan. OEHRM provided OIG staff with inaccurate and incomplete data without disclosing known reliability issues and exclusions. OEHRM provided information that claimed “89% of proficiency checks were passed with a score of 80% or higher, in three attempts or less.” However, the OIG found that an earlier version of proficiency check results drafted by OEHRM for the OIG’s request, but not forwarded, that detailed much lower proficiency check results and showed that “44% of proficiency checks were passed with a score of 80% or higher in three attempts or less.” The OIG is completing an administrative investigation of this matter.

The OIG made 11 recommendations, which can be found in [appendix E](#), and eight are still open.

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

The fourth OIG report assessed the implementation of the EHR system’s patient scheduling component at the Columbus clinic and Mann-Grandstaff VAMC.<sup>12</sup> The OIG found that VHA and OEHRM knew of significant limitations before and after implementing the scheduling system without fully resolving those limitations, 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. With limited guidance and

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<sup>12</sup> VA OIG, [New Patient Scheduling System Needs Improvement as VA Expands Its Implementation](#), November 10, 2021.

inadequate training on how to respond these unresolved issues, schedulers developed work-arounds. Employees reported problems with data that had been migrated from legacy systems, and staff also worked with Cerner to try to correct issues using an ineffectively managed help ticketing process. OEHRM leaders did not provide scheduling staff with adequate chances to identify limitations in the new scheduling system before implementation. Additionally, OEHRM did not assess Cerner's compliance with contract terms for handling tickets. The OIG made eight recommendations, which can be found in [appendix F](#), and all remain open.

## **2022 EHRM OVERSIGHT REPORTS**

The concerns the OIG expressed about medication management and veterans' ability to get prescription refills and renewals in a timely manner were reported before the first go-live event at Mann-Grandstaff VAMC. They portended the problems that the OIG identified following the deployment associated with data migration, medication-ordering, and patient information challenges. Although the OIG's 2022 reports have continued to focus on broad programmatic issues found at the initial operating site, they also give serious consideration to the experiences of the first VHA system users to deliver care and the potential consequences for veterans. While oversight at the Mann-Grandstaff VAMC centered on that facility, the findings and recommendations have broad applicability for future sites.

The OIG released three reports in March 2022 responsive to a range of complaints submitted to the OIG hotline following the EHR system's deployment to Mann-Grandstaff VAMC. Members of Congress also shared concerns about the care that veterans were receiving. OIG healthcare inspections staff began work on two efforts to address several priority concerns. They focused primarily on medication management and patient care coordination. During the two inspections, the OIG team identified further challenges with the "trouble" or "help" ticketing process for system users to submit concerns and seek assistance. Because the deficiencies were similar to those identified in the OIG's 2021 reports, the healthcare oversight team started a third effort to address persistent challenges in resolving reported problems and the underlying causal factors. When VA responded to the three reports in early March 2022, nearly a year and a half following Mann-Grandstaff VAMC's October 2020 go-live event, VA stated that EHRM IO and VHA had addressed only eight of the 37 issues that remained unresolved after the OIG completed its inspection in June 2021. With less than 25 percent of identified deficiencies redressed, most of the concerns remain largely unresolved today.

In addition to this trilogy, the OIG released a report examining the master and underlying schedules for the full deployment of the EHR system for reliability and other key components. The key findings from these four reports are detailed in the sections that follow.

## 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.<sup>13</sup> 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. However, the risk of harm increases when systems have poor usability, workflows, or data inputs.

The problems with medication management and prescriptions within the new EHR became apparent shortly after the system went live. A facility staff member reported a daily average of one hundred patients were showing up at the medical center 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. 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, the VA migrated contact information and clinical data for approximately 88,000 veterans to the new EHR. The OIG found that outdated DoD data overwrote the 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 work for care providers and pharmacy staff. The figure below shows available options in the new EHR related to a single medication commonly used to control blood pressure or heart rate. It illustrates how a single medication can have dozens of entries of drug

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<sup>13</sup> 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.



formulations and strength options, frustrating providers searching for the desired medication and increasing the risk of error.

Search:   Type:

Search within:

- metoprolol succinate 25 mg oral capsule, extended release
- metoprolol succinate 25 mg oral tablet, extended release
- metoprolol succinate 50 mg oral capsule, extended release
- metoprolol succinate 50 mg oral tablet, extended release
- metoprolol succinate 100 mg oral capsule, extended release
- metoprolol succinate 100 mg oral tablet, extended release
- metoprolol succinate 200 mg oral capsule, extended release
- metoprolol succinate 200 mg oral tablet, extended release
- Metoprolol Succinate ER 25 mg oral tablet, extended release
- Metoprolol Succinate ER 25 mg oral tablet, extended release  
1 tab(s), Oral, Daily, for blood pressure, # 90 tab(s)
- Metoprolol Succinate ER 50 mg oral tablet, extended release
- Metoprolol Succinate ER 50 mg oral tablet, extended release  
1 tab(s), Oral, Daily, for blood pressure, # 90 tab(s)
- Metoprolol Succinate ER 100 mg oral tablet, extended release
- Metoprolol Succinate ER 100 mg oral tablet, extended release  
1 tab(s), Oral, Daily, for blood pressure, # 90 tab(s)
- Metoprolol Succinate ER 200 mg oral tablet, extended release
- Metoprolol Succinate ER 200 mg oral tablet, extended release  
1 tab(s), Oral, Daily, for blood pressure, # 90 tab(s)
- metoprolol tartrate 1 mg/mL injectable solution
- ◆ metoprolol tartrate 10 mg/mL oral solution
- ◆ Metoprolol tartrate 10mg/ml oral susp compound
- metoprolol tartrate 25 mg oral tablet
- metoprolol tartrate 25 mg oral tablet 0.5 tab(s), Oral, BID
- metoprolol tartrate 25 mg oral tablet 1 tab(s), Oral, BID, # 180 tab(s)
- metoprolol tartrate 25 mg oral tablet (one-half of 50 mg)
- metoprolol tartrate 25 mg oral tablet (one-half of 50 mg)  
0.5 tab(s), Oral, BID, # 90 tab(s), Replace SIG for label: Take a half ta...
- metoprolol tartrate 37.5 mg oral tablet
- metoprolol tartrate 37.5 mg oral tablet (one-half of 75 mg)
- metoprolol tartrate 37.5 mg oral tablet (one-half of 75 mg)  
0.5 tab(s), Oral, BID, # 90 tab(s), Replace SIG for label: Take a half ta...
- metoprolol tartrate 50 mg oral tablet
- metoprolol tartrate 50 mg oral tablet 1 tab(s), Oral, BID, # 180 tab(s)
- metoprolol tartrate 50 mg oral tablet (one-half of 100 mg)
- metoprolol tartrate 50 mg oral tablet (one-half of 100 mg)  
0.5 tab(s), Oral, BID, # 90 tab(s), Replace SIG for label: Take a half ta...
- metoprolol tartrate 75 mg oral tablet
- metoprolol tartrate 100 mg oral tablet
- metoprolol tartrate 100 mg oral tablet 1 tab(s), Oral, BID, # 180 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 25mg-12.5mg oral tablet, extended...
- ◆ metoprolol-hydroCHLORothiazide 25mg-12.5mg oral tablet, extended...  
1 tab(s), Oral, Daily, # 30 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 25mg-12.5mg oral tablet, extended...  
2 tab(s), Oral, Daily, # 60 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 50mg-12.5mg oral tablet, extended...
- ◆ metoprolol-hydroCHLORothiazide 50mg-12.5mg oral tablet, extended...  
1 tab(s), Oral, Daily, # 30 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 50mg-12.5mg oral tablet, extended...  
2 tab(s), Oral, Daily, # 60 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 50mg-25mg oral tablet  
1 tab(s), Oral, BID, # 60 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 50mg-25mg oral tablet  
1 tab(s), Oral, BID, # 180 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 100mg-25mg oral tablet
- ◆ metoprolol-hydroCHLORothiazide 100mg-25mg oral tablet  
1 tab(s), Oral, BID, # 60 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 100mg-25mg oral tablet  
1 tab(s), Oral, BID, # 180 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 100mg-50mg oral tablet
- ◆ metoprolol-hydroCHLORothiazide 100mg-50mg oral tablet  
1 tab(s), Oral, Daily, # 30 tab(s)
- ◆ metoprolol-hydroCHLORothiazide 100mg-50mg oral tablet  
1 tab(s), Oral, Daily, # 90 tab(s)
- ◆ FIRST-Metoprolol 10 mg/mL oral solution

## 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. These ranged from orders failing to process to patients' recurring future medication orders being automatically discontinued without notice to care providers. Staff were also unable to track prescription orders for patients. On the back end of the ordering process, the OIG received varied accounts on the functionality of the Prescription Drug Monitoring Program (PDMP) process in the new EHR. The PDMP is a state-controlled substance monitoring program that requires pharmacy staff to transmit records each time a controlled substance is prescribed and given to a patient. 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 Order Placement    | Registered nurses were able to order medications without provider approval.  | Substantiated     | Unresolved     |
| Outpatient Orders Not Processed | Pharmacy staff failed to process outpatient medication orders.   | Not Substantiated | Not Applicable |
|                                 | Some outpatient medication orders failed to process and were missing to non-pharmacy 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     | Pharmacy staff were unable to consistently track mailed controlled substance prescriptions.  | Not Substantiated | Not Applicable |

|                       |   |               |            |
|-----------------------|---|---------------|------------|
| Controlled Substances | Non-pharmacy staff were unable to 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**

| <b>Medication Reconciliation</b>         | <b>Allegations</b>   | <b>OIG Determination</b> | <b>Status</b> |
|--|--|--------------------------|---------------|
| Medication List Discontinuity            | Staff had to update medication lists at every visit because prior medication information revisions did not carry over to the next appointment. | Substantiated            | Unresolved    |
|  | Medications disappeared from reconciled medication lists, and lists were inaccurate after reconciliation.                                      | Substantiated            | Unresolved    |
|  | Staff manually entered medication lists following reconciliation, which introduced increased risk for error and possible 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 on medication lists during reconciliation, creating a patient safety issue.             | Substantiated            | Unresolved    |
|  | Medications administered in clinic did not appear on medication lists, creating a patient safety issue.  | Substantiated            | Unresolved    |
| Medication Lists Unsited for Patient Use | Medication lists were not patient-friendly.  | Substantiated            | Unresolved    |

While all medication reconciliation allegations were substantiated and unresolved, the OIG reported that facility staff have since observed improvements in medication list continuity. For the resulting report,

the OIG made two recommendations, found in [appendix G](#), and both are open. VA concurred with the first recommendation. 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 reporting requirement to the OIG with no end date or defined parameters. This is not an open-ended recommendation and would be closed when VA demonstrates that there is an effective and sustainable process to identify and address patient safety issues. VA already has the obligation to provide this information to the OIG regardless of whether VA concurs with the recommendation, and the OIG will continue its oversight work of the medication management concerns that continue to be referred to it.

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

The second report addressed an expansive list of allegations categorized as care coordination concerns.<sup>14</sup> 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 challenges with care coordination, the VAMC's coordinator for the new EHR patient portal reported a backlog after the go-live in October 2020 of over 300 voicemail messages from patients unable to access the portal. During the COVID-19 pandemic, the portal is a central means for patients to communicate with care providers. The OIG further sorted the allegations into eight categories. Each had multiple deficiencies:

- **Patient Record Flags:** The OIG substantiated deficiencies related to patient record flags following implementation of the new EHR. 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's 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 EHR views, staff had to navigate multiple steps to find information about the flag and relevant precautions. Of the six substantiated allegations, only two remain unresolved: the visibility of the flag and national-level data sharing of active record flags for patients at high risk for suicide.
- **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.

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<sup>14</sup> 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.

- **Scheduling Process:** Initial allegations received by the OIG cited delays in scheduling and inadequate appointment information and reminders within the new EHR. Reminders to veterans and caregivers did not always specify when appointments were by telephone rather than in-person appointments, resulting in some patients traveling to the facility for telephone appointments. The OIG was also alerted to problems with the configuration of the new self-scheduling tool in the patient portal that resulted in facility patients located in Washington State inadvertently self-scheduling appointments at the Columbus clinic. Of the five related substantiated allegations, four remain unresolved, particularly related to delays in scheduling primary care appointments, the type of appointment, and the information contained on appointment reminders.
- **VA Video Connect:** This VHA telehealth service technology enables veterans to meet virtually with VA healthcare providers from anywhere, using encrypted video to ensure the session is secure and private. This technology has been a critical tool during the pandemic. The OIG substantiated some allegations that appointments failed due to broken links, incorrect time zones, and links being sent to outdated email addresses. VA still needs to completely resolve only the last allegation, as some veterans are still having to contact DoD to have their contact information updated.
- **Referral Management:** Deficiencies in the implementation of 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 to care and affect patient experiences at VHA more generally. For example, care 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 remain unresolved.
- **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 are unresolved.
- **Patient Portal and Secure Messaging:** The OIG substantiated there were deficiencies in the functionality of the patient portal's secure messaging feature. When the new EHR went live, many patients were unable to access the patient 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 the Office of Information and Technology (OIT) resolved some causes of this disruption, while other changes were in progress to resolve remaining issues.
- **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, are unresolved.

For this report, the OIG made three recommendations, located in [appendix H](#), and all are open.

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

The OIG decided to issue this third report in the trilogy to provide an analysis of the persistent issues with the trouble ticket process used for reporting problems and requesting assistance at Mann-Grandstaff, including identifying the underlying causal factors.<sup>15</sup> From the October 2020 go-live 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 the ticket comments to understand the frustration of facility staff 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.<sup>16</sup>
- **The same Cerner staff closed tickets before resolving the issues.** The closure of tickets without resolution of the concerns raised could result in patient safety issues as well as the propagation of similar issues at future implementation sites. Additionally, facility staff reported they felt they were not being supported or heard.

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<sup>15</sup> 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.](#)

<sup>16</sup> In the response VA gave to the OIG shortly before publication, the VA wrote that Cerner service desk support staff had been enabled 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.

- **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 issues before Cerner service desk support staff closed the tickets. Mann-Grandstaff VAMC staff reported frequently during 2021 that Cerner’s service desk staff were unhelpful or rude. The OIG concluded that these communication 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 the challenge with the ticket process, 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.

VA’s “Electronic Health Record Comprehensive Lessons Learned” report released in July 2021 confirmed the deficient ticket processes.<sup>17</sup> While VA has identified proposed measures to monitor these process changes, the report stated that the measures had not been finalized and were under review.

### ***Underlying Factors of Substantiated Allegations in Companion Reports***

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

- **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.
- **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.
- **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.
- **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

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<sup>17</sup> Department of Veterans Affairs, [Electronic Health Record Modernization Comprehensive Lessons Learned Report](#), November 2021. The report was initially released in July 2021 and updated in November 2021.

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.

- **Problem Resolution Process Challenges.** Successful EHR implementation requires effective pathways for resolving identified problems, and as discussed in this report and its companions, the ticket process was had several deficiencies.

For this report, the OIG made three recommendations, found in [appendix I](#), and all are open.

### **The EHRM Program Did Not Fully Meet the Standards for a High-Quality, Reliable Schedule**

To implement the program successfully and within budget, it is imperative that VA develop a reliable integrated master schedule (IMS).<sup>18</sup> GAO guidance, which the EHRM program office adopted in its internal plans, states that a high-quality, reliable schedule should be comprehensive, credible, well-constructed, and controlled. The IMS is designed to cover the entire required scope of work needed to successfully complete the program from start to finish, including both government and contractor work. VA should be using it as a road map to completion, to monitor progress, and to help identify potential problems and track their resolution, and to promote accountability for assigned tasks.

Although not every task for a 10-year project can be accounted for early on, there are strategies and tools for creating a comprehensive schedule that can be tailored over time. Without a comprehensive baseline and a reliable schedule, VA risks delays, dropped activities (some of which are prerequisites for others), and budget overruns.

First, the audit evaluated whether the IMS met GAO scheduling standards. Second, the OIG assessed whether OEHRM took the steps needed for compliance with regulations requiring that IMS submissions 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 the related invoices were paid. In one instance, VA paid the invoice about 10 months before accepting the deliverable. VA cannot ensure submissions meet quality standards if payments are made before review. This is a violation of acquisition regulations that require 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. These are highlights of significant findings where the VA failed to fully meet scheduling standards:

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<sup>18</sup> VA OIG, [The Electronic Health Record Modernization Program Did Not Fully Meet the Standards for a High-Quality, Reliable Schedule](#), April 25, 2022.



- **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 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.
- **Controlled.** A controlled IMS should include a baseline schedule, used for managing the program and conducting trend analyses over time to assess program performance. But, 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 complete 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 officials in OEHRM did not collaborate with them during development work, 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 in detail all work needed to complete the program. Guidance documents inconsistently assigned these responsibilities to VA or one of its contractors—Booz Allen Hamilton, Inc., or Cerner Corporation, leading to confusion.

Cerner accepted responsibility for the WBS and, in July 2020, worked with VA to create the program's WBS. 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, 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 J](#), and all are open.

## PENDING OIG REVIEWS

The OIG has ongoing efforts across its directorates.<sup>19</sup> The Office of Special Reviews is finalizing a joint project led by the DoD Office of Inspector General. That joint project examined the extent to which VA's new EHR will achieve interoperability with DoD, and community healthcare providers to ensure that health care providers can access a patient's complete EHR. It also examined the Federal Electronic Health Record Modernization (FEHRM) Program Office's role. The audit found that the VA and the DoD did not consistently migrate patient healthcare information from the legacy system into the new EHR to create a single, complete patient health record; develop interfaces from all medical devices to the new EHR so that patient healthcare information will automatically upload to the system from those devices; or ensure that users were granted access to the system for only the information needed to perform their duties. The VA and DoD did not take all action necessary to achieve interoperability because FEHRM Program Office officials did not develop and implement a plan to achieve all FY 2020

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<sup>19</sup> These reports are in draft form and currently under review at the agencies or in final stages before publication, consistent with OIG practices. OIG staff will integrate VA's feedback and plans for implementing recommendations prior to publication. While it is not OIG practice to discuss not-yet-published reports, due to this hearing's timing and the agencies having reviewed these draft reports, the findings are generally described.

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National Defense Authorization Act requirements or take an active role to manage the program's success as authorized by its charter.

The OIG's Office of Healthcare Inspections is conducting a review of the metrics VHA uses to monitor performance at facilities. The use of metrics is critical to management of VHA nationwide, so missing quality and patient safety metrics thwart accurate and timely patient safety monitoring and could impede identification of opportunities for improving quality and timeliness of care delivery.

## **CONCLUSION**

This Subcommittee 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 use of the EHR. The OIG is committed to providing thorough and practical recommendations that flow from its oversight work to help VA deploy the new EHR efficiently and in a manner that improves veterans' and staffs' experiences. The OIG will continue to monitor VA's EHRM efforts to help facilitate the improvements needed to fulfill its promise to the veteran community and make the most effective use of taxpayer dollars.

Chairman Mrvan, 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 REVIEW OF ACCESS TO CARE AND CAPABILITIES DURING VA'S TRANSITION  
TO A NEW ELECTRONIC HEALTH RECORD 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**
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**
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**
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.**

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**APPENDIX B - 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.

6. The executive director of OEHRM should fill infrastructure-readiness team vacancies until optimal staffing levels are attained.

**Status:** Open.

7. The executive director of OEHRM should ensure physical security assessments are completed and addressed at future EHR deployment sites.

**Status:** Open.

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.

**APPENDIX C - 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.**
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.**
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.**
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.**

**APPENDIX D - 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.**
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.**
3. The executive director of OEHRM should develop procedures for cost-estimating staff that align with VA cost-estimating guidance. **Status: Open.**

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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.

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.

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.

**APPENDIX E - 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 comprised 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.

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: Open.

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.

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

Status: Open.

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.

6. The deputy secretary evaluates the process of super user selection and takes action as indicated.

Status: Closed February 1, 2022.

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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.

8. The deputy secretary oversees the revision of an OEHRM training evaluation plan and ensures implementation of stated objectives.

Status: Open.

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.

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 F - 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.

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.

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.

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.



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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.

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.

**APPENDIX G - 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.

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.

**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.

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.

3. The deputy secretary ensures the EHRM deployment schedule reflects resolution of the allegations and concerns discussed in this report.

Status: Open.

**APPENDIX I - 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.

**APPENDIX J - 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.

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.

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.

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.

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.

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.