



April 2024

ELECTRONIC HEALTH RECORDS DOD Has Deployed New System but Challenges Remain

Accessible Version

GAO Highlights

View [GAO-24-106187](#). For more information, contact Carol Harris at (202) 512-4456, or HarrisCC@gao.gov.

Highlights of [GAO-24-106187](#), a report to congressional committees

April 2024

ELECTRONIC HEALTH RECORDS

DOD Has Deployed New System but Challenges Remain

Why GAO Did This Study

DOD's health care system is one of the largest in the nation, providing crucial services to millions of service members, retirees, and their family members. The department has taken major steps to modernize the EHR systems it uses to manage patient health information.

Federal law includes provisions for GAO to review DOD's EHR system modernization. This report examines (1) the progress DOD and VA have made toward implementing the federal electronic health record system at the Federal Health Care Center, (2) the extent to which DOD has identified user satisfaction with the system, and (3) the extent to which DOD has managed key issues affecting system implementation.

GAO analyzed agency documentation, such as implementation plans and results of user satisfaction surveys. GAO also reviewed program documentation on long-standing EHR-related issues, including issues with deploying the dental module. In addition, GAO observed monthly program management meetings where top program risks were discussed, interviewed department officials, and conducted a site visit to the Federal Health Care Center.

What GAO Recommends

GAO is making four recommendations: one to DOD and one to VA to address integration barriers at the Federal Health Care Center, and two to DOD to establish user satisfaction targets and implement a plan to provide a dental module alternative. In written comments on a draft of this report, DOD and VA generally agreed with our recommendations.

What GAO Found

The Department of Defense (DOD) has deployed its new federal electronic health record (EHR) system, called MHS GENESIS, at military treatment facilities. The final system deployment took place in March 2024 at the Federal Health Care Center, a joint DOD and VA facility.

As of March 2024, DOD and VA reported that they had completed the 35 critical tasks and milestones required to implement the new system at the joint facility, but the departments have opportunities to further integrate their systems. Accordingly, DOD and VA began a process to resolve differences between their respective workflows and EHR configurations to increase integration. However, the process did not result in a fully integrated approach due to reasons such as legal and policy barriers. Until it addresses these barriers, DOD and VA will likely not meet the integration goal established for the Federal Health Care Center.

In 2022, DOD began conducting an annual survey of MHS GENESIS user satisfaction and worked with a contractor to analyze survey data. User satisfaction rates for DOD's new system have improved over the past 2 years. However, the user satisfaction rates for the new system were generally lower than the rates for users of DOD's legacy systems and for private-sector users of the commercial version of MHS GENESIS (see table).

User Satisfaction Results from DOD's 2023 Annual User Satisfaction Survey Compared to Results for DOD's Legacy Systems and Similar Private-Sector Systems

Survey question topic	New electronic health record	Legacy systems	Private-sector systems
Patient-centered care	39%	56%	46%
Efficiency	20	36	32
Downtime	49	45	67
Response time	21	31	40
Quality care	29	46	50

Source: GAO analysis of Department of Defense (DOD) information. | GAO-24-106187

Note: DOD legacy system data come from 2022 survey results. Data for DOD's new electronic health record and for private-sector systems come from 2023 survey results.

Although user satisfaction levels are below those for its other relevant systems, DOD has not yet established satisfaction goals. Without goals for improving user satisfaction, the department will be limited in its ability to measure progress, plan for improvements, and ensure the system meets users' needs.

DOD's Program Executive Office has implemented an issue management plan to address key issues affecting MHS GENESIS. However, it has not been able to resolve problems with its dental module, called Dentrrix. These problems, which began in 2018, continued to plague Dentrrix through January 2024. This led to DOD elevating the issue to the severe level and deciding to identify Dentrrix alternatives. However, DOD does not yet have a plan or schedule for identifying alternatives. Until the office resolves the Dentrrix issue, the new federal EHR will not provide critical functionality to dentists who treat DOD beneficiaries.

Contents

GAO Highlights	ii
Why GAO Did This Study	ii
What GAO Recommends	ii
What GAO Found	iii
Letter	1
Background	3
DOD and VA Implemented the Federal EHR at the FHCC but Integration Opportunities Remain	9
DOD Identified User Satisfaction but Has Not Established Satisfaction Goals	13
DOD Has a Plan to Manage Issues but Has Not Resolved Dental Module Problems	22
Conclusions	25
Recommendations for Executive Action	25
Agency Comments and Our Evaluation	26
Appendix I: Objectives, Scope, and Methodology	28
Appendix II: Comments from the Department of Defense	30
Accessible Text for Appendix II: Comments from the Department of Defense	33
Appendix III: Comments from the Department of Veterans Affairs	36
Accessible Text for Appendix III: Comments from the Department of Veterans Affairs	38
Appendix IV: GAO Contacts and Staff Acknowledgments	40
Table	
Table 1: Selected Results from Department of Defense (DOD) Annual User Satisfaction Survey, 2022 and 2023	14
Figures	
Figure 1: Comparison of Patient-Centered Care Results	15
Accessible Data Table for Figure 2: Comparison of Patient- Centered Care Results	15
Figure 3: Comparison of Efficiency Results	16

Accessible Table Data for Figure 4: Comparison of Efficiency Results	16
Figure 5: Comparison of Downtime Results	18
Accessible Data Table for Figure 6: Comparison of Downtime Results	18
Figure 7: Comparison of Response Time Results	19
Accessible Data Table for Figure 8: Comparison of Response Time Results	19
Figure 9: Comparison of Quality Results	21
Accessible Table Data for Figure 10: Comparison of Quality Results	21

Abbreviations

DOD	Department of Defense
EHR	electronic health record
FHCC	Captain James A. Lovell Federal Health Care Center
IT	information technology
MHS	military health system
VA	Department of Veterans Affairs

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



April 18, 2024

The Honorable Jon Tester
Chair
The Honorable Susan Collins
Ranking Member
Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Ken Calvert
Chair
The Honorable Betty McCollum
Ranking Member
Subcommittee on Defense
Committee on Appropriations
House of Representatives

The Department of Defense (DOD) operates the Military Health System (MHS), one of the nation's largest health care systems. In fiscal year 2022, MHS provided health care to about 9.5 million beneficiaries, including service members, retirees, and their family members, at a cost of approximately \$55.4 billion. MHS currently provides care to beneficiaries at more than 700 military hospitals and clinics (i.e., military treatment facilities) around the world.

DOD determined that the multiple legacy electronic health record systems it implemented over the past 3 decades to create, maintain, and manage patient health information required modernization.¹ Consequently, the department has sought to replace them with a comprehensive, real-time electronic health record (EHR) system.

In response, the Secretary of Defense chartered the Program Executive Office of the Defense Healthcare Management Systems (the Program Executive Office) in 2013 to improve the health care of DOD's beneficiaries. This office's mission includes modernizing DOD's EHR and establishing medical data sharing among DOD, the Department of Veterans Affairs (VA), and the private sector. Toward this end, in 2017

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

DOD began deploying MHS GENESIS—a commercial EHR system intended to integrate inpatient and outpatient medical and dental information.² The final system deployment took place in March 2024 at the James A. Lovell Federal Health Care Center (FHCC), a joint DOD and VA facility.

The Consolidated Appropriations Acts of 2022 and 2023 include provisions for GAO to review DOD’s electronic health record deployment.³ Our objectives for this review were to determine (1) the progress DOD and VA have made toward implementing the federal electronic health record system at the FHCC, (2) the extent to which DOD has identified user satisfaction with the system, and (3) the extent to which DOD has managed key issues affecting system implementation.

To address the first objective, we analyzed plans for implementing the new EHR at the FHCC and information describing the steps DOD and VA have taken. Specifically, we reviewed an implementation summary report, management presentations on the status of the program, and documentation describing roles and responsibilities for the various organizations responsible for deployment as well as the requirements process and the outcomes of that process. In addition, we had discussions with officials from the Federal EHR Modernization Office, the FHCC, VA, and DOD on the status of the deployment. We also conducted a site visit to the FHCC and discussed implementation progress with those responsible.

To address the second objective, we obtained and reviewed results of user satisfaction surveys that DOD conducted and an analysis of the survey data conducted by DOD’s survey analysis contractor. Additionally, we obtained information from program officials to determine whether the department had established any goals for user satisfaction.

To address the third objective, we reviewed the program’s risk management plan and monthly risk register and began tracking progress on long-standing issues related to the benefits eligibility system, overseas

²According to DOD, because the meaning of “genesis” is the origin or process of origin, the term “MHS GENESIS” was selected to represent the origin of a new electronic health record and business process for the MHS. Although GENESIS is not an acronym, DOD capitalizes the word as part of the full name MHS GENESIS.

³Consolidated Appropriations Act, 2022, Pub. L. No. 117-103, Title VI, 136 Stat. 49, 171 (2022). Consolidated Appropriations Act, 2023, Title VI, Pub. L. No. 117-328, 136 Stat. 4459, 4853 (2022).

deployment of the new EHR, and the dental module included with the new EHR in October 2022. To determine the extent to which DOD has managed these issues, we observed monthly program management meetings where top program risks and issues were discussed. We also interviewed officials who served as points of contact for these issues. Further details on our objectives, scope, and methodology are provided in appendix I.

We conducted this performance audit from August 2022 to April 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The goal of DOD's MHS is to support medical readiness by ensuring the health and fitness of service members. It is to do so by providing medical care to service members, retirees, and their families. In the MHS, a wide range of clinical services are available at military treatment facilities, depending on their size, mission, and levels of capability.

To support the delivery of health care services, DOD previously developed, procured, and maintained a variety of legacy EHR systems. Each system has different functions and capabilities; for example, the department operates separate inpatient, outpatient, and dental systems. The department also operates several other individual systems that are used for managing referrals, tracking medical readiness, and sharing data with VA, among other things.

Since 1998, DOD and VA have worked to exchange electronic health records. Further, since 2008, Congress has mandated that the two departments achieve interoperability between their separate health care systems. DOD determined that its systems needed to be modernized. To modernize its systems and achieve interoperability with VA, DOD is implementing MHS GENESIS, which is based on commercially available products, including Oracle Health's electronic health record system. The department awarded a contract to the Leidos Partnership for Defense Health in July 2015 to implement the new EHR system.

In June 2017, VA initiated the electronic health record modernization program to replace its legacy system with the same Oracle Health EHR system DOD acquired.⁴ The EHR Modernization Integration Office is the organization within VA responsible for planning and implementing the modernization program. In October 2020, VA deployed the new EHR to its first site. After pausing for a strategic review in 2021, VA deployed the system to an additional four sites in 2022.

In April 2023, VA announced that it planned to halt future deployments of the new EHR system to prioritize making improvements at the five sites currently using the system. VA is not planning to schedule additional deployments until it is confident that the new EHR system is functioning effectively at those five sites. However, the health care facility shared by DOD and VA, the Captain James A. Lovell Federal Health Care Center (FHCC), was exempted from the pause.

DOD Has Implemented MHS GENESIS at Facilities Around the World

As of March 2024, according to DOD documentation, the department had implemented MHS GENESIS at all of its military treatment facilities. DOD's plans called for implementing the system in 24 waves (i.e., phases), with completion of the first wave in October 2017 and completion of the last wave by December 2023.⁵

As a result, DOD has reported that MHS GENESIS has more than 171,000 users. In addition, the system has been deployed to the U.S. Military Entrance Processing Command, the U.S. Coast Guard, and the National Oceanographic and Atmospheric Administration, with further plans to deploy to the National Security Agency.

The FHCC

The final DOD site where the new electronic health record was deployed was the FHCC in North Chicago, Illinois. The FHCC opened on October 1, 2010, and combined DOD and VA facilities in and around North

⁴VA contracted with Cerner Government Services, Inc. (Cerner) for the department's new EHR system in May 2018. Subsequently, in June 2022, Cerner was acquired by Oracle Corporation and began formally identifying itself as Oracle Health, which is the name we use throughout this report.

⁵Each wave contains between 1,500 and 11,000 users at multiple sites and is generally named for the largest military treatment facility in the wave.

Chicago, Illinois, into a first-of-its-kind joint facility. Specifically, the FHCC integrated services previously provided by the former North Chicago VA Medical Center and its community-based outpatient clinics and the Naval Health Clinic Great Lakes and its associated clinics, among others.

The FHCC provides health care to 76,000 patients per year, including service members, veterans and other beneficiaries throughout northern Illinois and southeastern Wisconsin. Additionally, the FHCC ensures that the nearly 34,000 Navy recruits who pass through Naval Station Great Lakes each year are medically ready. As of September 2023, the site has an operating budget of approximately \$680 million and a workforce of approximately 3,200. The FHCC has approximately 300 beds and two campuses:

- The east campus is comprised of health clinics that had been part of the former Naval Health Clinic, which provide health care primarily to the Navy recruits who train at the Naval Station Great Lakes throughout each year.⁶
- The west campus includes the former North Chicago VA Medical Center, where both VA and DOD beneficiaries receive health care services.

At the FHCC, the new EHR is called the federal EHR. At DOD sites, the new EHR is called MHS GENESIS, while the VA refers to its version as the new EHR. The federal EHR is the same commercial product (Oracle Health Millennium) both departments purchased. The Federal EHR Modernization Office leads the multi-agency project to implement the federal EHR at the FHCC.⁷

⁶Medical and dental services are provided to Navy recruits on the East Campus in support of the Recruit Training Command and Training Support Center. The FHCC is responsible for the medical and dental readiness of each recruit.

⁷The Federal EHR Modernization Office works to implement a single, common electronic health record system, among other responsibilities. To this end, the office coordinates efforts and delivers common capabilities that enable DOD, VA, Department of Homeland Security's U.S. Coast Guard, Department of Commerce's National Oceanic and Atmospheric Administration, and other federal agencies to deploy the same commercial EHR system that the office refers to as the federal EHR. The Federal EHR Modernization Office's responsibilities include managing the shared environment that contains the federal EHR and supporting systems, leading analysis and integration of deployment activities at joint sites where DOD and VA resources are shared, overseeing configuration and content changes to the EHR that are agreed on by the departments through a joint decision-making process facilitated by the Federal EHR Modernization Office, and providing software upgrades and solutions to optimize EHR performance.

Roles and Responsibilities for FHCC Deployment

Because the FHCC exists as a collaborative effort between DOD and VA, several groups from both organizations have a role in the deployment.

- The Federal EHR Modernization Office has overall responsibility for deploying the federal EHR at the FHCC and is expected to provide guidance on implementing, using, and sustaining it. This includes developing and maintaining an integrated master schedule for its deployment. Moreover, the office is to establish and manage a forum for resolving differences in DOD and VA workflows and business processes.
- The FHCC provides site-level subject matter experts and leadership staff to ensure that the federal EHR meets operational requirements for the facility and to enable change management activities. It also is supposed to enforce the adoption of enterprise standards and workflows as part of the implementation and use of the federal EHR. The FHCC is expected to participate in relevant site activities, such as the predeployment questionnaire and the end-to-end assessment, which help to develop the implementation plan. The site is also expected to ensure that local staff participate in necessary deployment activities with the contractors.
- The EHR Modernization Integration Office is responsible for providing a VA federal EHR Functional Champion to engage in all functional decision-making, effectively ensuring that the FHCC implementation is consistent with other facility implementations. The office also provides personnel to support the deployment.
- The DOD Healthcare Management System Modernization Program Management Office is responsible for leveraging its MHS GENESIS deployment contract to coordinate the vendor team responsible for deployment at the FHCC. Additionally, the office is expected to collaborate with stakeholders to deploy and supply staff to help implement the system. The office is also supposed to facilitate decision-making on issues that may impact the deployment and ensure that stakeholders are providing needed information. Finally, it is accountable for tasks that the vendor is responsible for completing.
- The Leidos Partnership for Defense Health is the vendor with the primary responsibility of integrating the system and carrying out deployment activities at the FHCC on behalf of the DOD Healthcare Management System Modernization Program Management Office. Specifically, the vendor was expected to develop an implementation plan specific to the FHCC and manage daily activities related to

deploying the federal EHR at the FHCC. Additionally, the vendor is to use existing change management and issue resolution mechanisms that stakeholders provide and keep them informed of the EHR's deployment status. Finally, the vendor is responsible for DOD tasks that the departments are handling separately, such as training. Specifically, the vendor is responsible for all end-user training for staff at the FHCC who will be receiving DOD training.

- VA, through the Office of the Functional Champion, is to ensure that appropriate VA subject matter experts are engaged in decision-making at the FHCC.
- As the primary contractor for the VA deployment, Oracle Health is responsible for VA tasks that the departments are handling separately such as training. Specifically, Oracle Health is responsible for all end-user training for staff at the FHCC who will be receiving VA training. Additionally, Oracle Health is responsible for completing the VA current state assessment and VA connectivity testing, among other things.
- The Defense Healthcare Management Systems' Program Executive Office is to work with stakeholders to identify and supply the staff and expertise required to implement the federal EHR at the FHCC. The office also developed an implementation plan specifying the deployment approach for the FHCC.

Prior GAO Reports Identified Issues with DOD's New EHR and the FHCC

In September 2021, we reported that DOD had made progress implementing MHS GENESIS, improving system performance, and addressing issues experienced at the initial sites.⁸ However, issues identified during testing remained unresolved, and users faced training and communication challenges. Test results and selected system users indicated that training for MHS GENESIS and the dissemination of system change information were ineffective. For example, the users stated that training was not consistent with the live system. Further, users reported that there were too many system changes to keep up with and that they were not adequately informed as changes were implemented.

⁸GAO, *Electronic Health Records: DOD Has Made Progress in Implementing a New System, but Challenges Persist*, [GAO-21-571](#) (Washington, D.C.: Sept. 20, 2021).

As a result, users were unaware of important changes to their roles or business processes or to system revisions and improvements.

We made recommendations to the agency related to improving the effectiveness of MHS GENESIS training and ensuring users would be aware of system changes. DOD took actions that implemented these recommendations. We also recommended that DOD ensure any issues that testers identified had been resolved. As of March 2024, DOD had made progress resolving issues but had not fully implemented this recommendation.

In June 2022, we reported that the MHS GENESIS cost estimate and subproject schedules were not fully consistent with best practices.⁹ DOD's October 2020 MHS GENESIS cost estimate was unreliable because it did not substantially meet standards of a reliable cost estimate (comprehensive, well-documented, accurate, and credible). On a similar note, DOD's MHS GENESIS February 2021 schedule was also unreliable because it did not substantially meet all standards of a reliable schedule. We concluded that without reliable cost and schedule estimates, DOD increased the risk that management would not have the information necessary for effective decision-making.

We recommended that the Secretary of Defense direct DOD to ensure that the program office develop a reliable (1) schedule and (2) cost estimate using best practices. As of March 2024, DOD had implemented improvements to their schedule estimate that were sufficient to close the recommendation but had not completed an updated cost estimate.

Prior GAO reports on the FHCC described challenges with management and IT, among other things. Specifically, in 2016, we reported that limitations with the FHCC's leadership selection and evaluation processes could impede future collaboration between DOD and VA.¹⁰ The FHCC also faced difficulties integrating certain clinical and administrative operations, including IT. We made eight recommendations, including that VA and DOD collaborate to establish selection criteria for FHCC leadership and that prior to future integration efforts, VA and DOD

⁹GAO, *Electronic Health Records: Additional DOD Actions Could Improve Cost and Schedule Estimating for New System*, [GAO-22-104521](#) (Washington, D.C.: June 8, 2022).

¹⁰GAO, *Federal Health Care Center: VA and DOD Need to Address Ongoing Difficulties and Better Prepare for Future Integrations*, [GAO-16-280](#) (Washington, D.C.: Feb. 29, 2016).

conduct data-driven strategic workforce planning and resolve differences in IT network security standards to the greatest extent possible.

In 2017, we reported that VA and DOD did not provide time frames for implementing improvements that they recommended in their report to Congress and that the program did not have an updated cost-effectiveness analysis.¹¹ Subsequently, we recommended that the Secretaries of VA and DOD collaborate to establish time frames and interim milestones for tracking the implementation of the jointly recommended improvements and that they conduct a cost-effectiveness analysis for the FHCC. By June 2018, both departments had implemented these recommendations.

DOD and VA Implemented the Federal EHR at the FHCC but Integration Opportunities Remain

DOD and VA took steps to implement the federal EHR at the FHCC. Critical tasks were completed prior to the system going live at the FHCC, but the departments have opportunities to further integrate their systems.

DOD and VA Implemented the Federal EHR at the FHCC

The DOD Healthcare Management System Modernization Program Implementation Plan called for the federal EHR system to be deployed to the FHCC on March 9, 2024. This plan included a series of tasks, such as defining roles and responsibilities, conducting reviews of the current state of the facility, and establishing governance.

DOD and VA completed critical tasks to implement the federal EHR at the FHCC in accordance with their implementation plan by March 9, 2024. Specifically, the departments reported that they completed the 35 critical tasks and milestones outlined in their implementation plan. For example, in March 2023, the Leidos Partnership for Defense Health completed a review of the site's current state, which included identifying technical and training requirements through data analysis, walk-throughs, and focus groups. This analysis informed the requirements process and facilitated integration efforts by identifying deployment gaps and technical

¹¹GAO, *Federal Health Care Center: VA and DOD Need to Develop Better Information to Monitor Operations and Improve Efficiency*, [GAO-17-197](#) (Washington, D.C.: Jan. 23, 2017).

requirements. In April 2023, FHCC staff conducted a governance workshop launching the local informatics steering committee and developed the charter that defines its roles and responsibilities.¹² Furthermore, by October 2023, the Leidos Partnership successfully ordered, deployed, and validated the hardware necessary to support the deployment of the new system. This milestone helped ensure that devices and interfaces for FHCC systems and the federal EHR were connected. Additionally, DOD and VA reported completing the critical task of providing end-user training in February 2024.

In addition to the critical tasks identified in the implementation plan, the FHCC planned to fill 135 permanent positions to support deployment efforts. However, in September 2023, FHCC officials reported that challenges with the hiring process could limit their ability to bring the necessary staff onboard in time. As of March 2024, DOD and VA stated that 71 of the 135 positions had been filled. Staffing was a top concern at the FHCC because many of the mitigation strategies in place for potential challenges called for adding staff. According to FHCC officials, challenges with hiring include a long onboarding process (approximately 137 days from vacancy to full employment on average), lack of competitive salary for certain positions, and difficulty competing with other employers who offer remote positions.

Additional Opportunities for Integration Will Remain after Deployment

The executive agreement establishing the FHCC noted the importance of integration at the FHCC. For example, the agreement stated that systems should exchange information to the greatest extent possible. Additionally, the requirements process that the Federal EHR Modernization Office led

¹²The local informatics steering committee is responsible for ensuring completion of all deployment activities, ensuring that local decisions are made in a timely manner, and resolving all local issues in preparation for system deployment, among other things. The committee is led by a member of facility leadership, such as the Chief Medical Information Officer, and membership includes functional, technical, and operational stakeholders representing each major area of operations. At the FHCC, the informatics steering committee is referred to as the Health Informatics Integrated Governance Committee.

at the FHCC sought to integrate whenever possible and noted that the goal of the process was integration.¹³

In January 2022, the Federal EHR Modernization Office, in accordance with the Lovell FHCC Federal EHR Implementation Memorandum of Agreement, began a process to resolve differences between the configuration of the new EHR at DOD and VA facilities. These differences stemmed from separate configurations for DOD and VA specific workflows, content, and user roles, some of which persist. As part of this resolution process, the lead contractor for the deployment, Leidos Partnership for Defense Health, reviewed key program documents to identify differences between DOD and VA's workflows and system configurations. The Leidos Partnership's review identified 69 topics to address to bridge the differences between DOD and VA at the FHCC.

DOD and VA documentation describing the requirements process identifies two potential outcomes of the resolution process: *convergence* or *divergence*:

- Convergence—DOD and VA would use the same workflow and system configuration.
- Divergence—the departments would use different workflows and configurations.

Although their goal is maximum integration, DOD and VA did not achieve convergence for most topics. Specifically, of the 69 topics identified, stakeholders recommended convergence for 31 topics and divergence for the remaining 38 topics. The topics selected for divergence represent opportunities for further integration. These 38 topics include patient care locations, pharmacy organization, and the dental module.

Patient care locations. Patient care locations are significant because they affect system functionalities that support eligibility, billing, and reporting. The stakeholders reviewed two options: (1) two separate patient care locations for DOD and VA or (2) a single patient care location for the entire facility. Although stakeholders determined that the single patient care location option was the optimal solution, they decided to use

¹³In April 2010, the parties at the FHCC entered into an executive agreement as authorized under section 1701 (a) of the National Defense Authorization Act for Fiscal Year 2010. This executive agreement stated that the departments should commit to establishing systems at the FHCC that would exchange information between DOD and VA to the greatest extent possible.

the two-patient care location approach due to legal and policy barriers that they determined would need to be addressed prior to implementing a single patient care location.

As a result of this decision, each FHCC clinic is assigned to the DOD or VA patient care location based on the specific workflows of each clinic. For example, the emergency department will be assigned to the VA patient care location and the pediatrics department will be assigned to the DOD patient care location. Staff at the facility will be assigned to a DOD or VA patient care location based on their clinic assignments. The Federal EHR Modernization Office has stated that it has plans to continue pursuing the single location option in the future.

Pharmacy organization. The FHCC has a single physical pharmacy that provides care for both DOD and VA patients. However, DOD and VA have different medication costs, copays, and billing systems. Stakeholders decided between two options, designing the system to have two pharmacies or one joint pharmacy. Ultimately, stakeholders determined that the single-pharmacy option was not viable because it could not support the different requirements for each department and selected the two-pharmacy option. However, stakeholders noted that if the legal barriers were removed, the selection should be revisited. As a result of this decision, pharmacy end-users will need to switch between DOD and VA pharmacies in the system.

The federal EHR's dental module. The VA dental clinic at the FHCC provides dental care to DOD and VA patients and uses VA's legacy dental system for documenting treatment. VA has determined that the dental module included with the federal EHR, Dentrax, does not meet its requirements and would not be sufficient to provide dental care to VA patients. Further, stakeholders determined that integration between the federal EHR and the VA legacy dental system was not possible. As a result, they initially decided in April 2022 to have both Dentrax and the VA legacy system in the VA dental clinic.

Subsequently, in March 2023, dental staff at the FHCC stated that the legacy system would be sufficient, and plans were revised to not implement Dentrax. However, in September 2023, the FHCC Informatics Steering Committee and the Federal EHR Modernization Office decided to revert to their initial decision to implement both Dentrax and the VA legacy system to ensure that all DOD patients have their dental treatment records updated in Dentrax for the sake of continuity. As a result of this

decision, the clinic will require two computers at each workstation so that both systems can be used simultaneously.

DOD and VA have identified the following reasons for not achieving convergence on most topics: (1) legal and policy barriers that preclude DOD and VA from fully integrating and (2) a lack of time and resources to complete the necessary work. However, in response to our queries, DOD and VA officials did not identify the specific legal and policy barriers that hinder further integration. If DOD and VA do not take additional steps to explicitly identify and address the barriers or prioritize the work needed for integration, they will likely not meet the integration goal established for the FHCC.

DOD Identified User Satisfaction but Has Not Established Satisfaction Goals

DOD survey results showed that satisfaction with DOD's EHR lagged behind levels reported by other health care entities. Additionally, DOD has not established goals to improve user satisfaction.

User Satisfaction with MHS GENESIS

The Fiscal Year 2020 National Defense Authorization Act required the Federal EHR Modernization Office to conduct a survey of clinician satisfaction with the electronic health record.¹⁴ DOD began conducting an annual user satisfaction survey to comply with this requirement in 2022.

DOD's 2023 survey of user experiences demonstrated improved satisfaction from 2022, but results indicated that system users continue to be generally dissatisfied with system response time, users' ability to work as efficiently as possible, and users' ability to deliver high quality care. The survey also indicated improvements in users' ability to deliver patient-centered care. The area with the most improvement was system availability. Table 1 provides additional details on these responses.

¹⁴National Defense Authorization Act for Fiscal Year 2020, Pub. L. No. 116-92, § 715(d), 133 Stat. 1198, 1450 (2019).

Table 1: Selected Results from Department of Defense (DOD) Annual User Satisfaction Survey, 2022 and 2023

Survey question	2022			2023		
	Agree	Disagree	Indifferent	Agree	Disagree	Indifferent
This electronic health record has the fast response time I expect (e.g., login time, screen refresh, retrieving information).	15%	69%	15%	21%	60%	18%
The electronic health record makes me as efficient as possible.	15	66	19	20	62	18
The electronic health record enables me to deliver high quality care.	24	44	32	29	39	31
The electronic health record allows me to deliver patient-centered care.	35	37	29	39	32	29
Over the past 2 weeks, the electronic health record was available when I needed it and down time was not a problem.	25	59	16	49	34	17

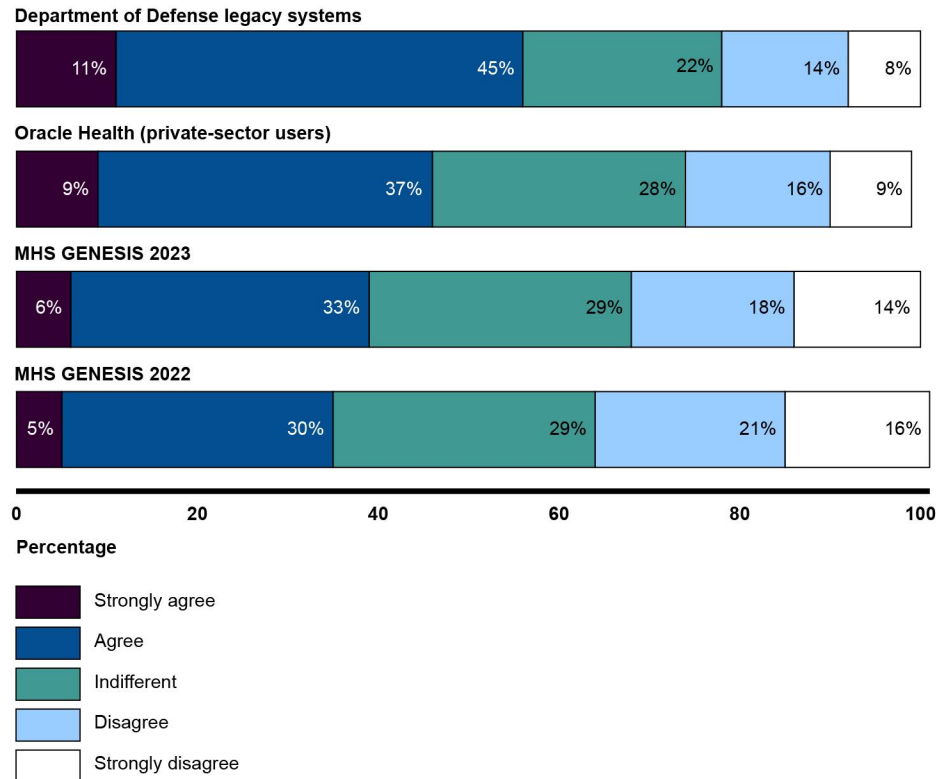
Source: GAO summary of DOD information. | GAO-24-106187

Satisfaction with MHS GENESIS Lagged behind DOD Legacy Systems and Other Health Care Entities

User satisfaction rates for MHS GENESIS increased minimally between 2022 and 2023 but lagged behind satisfaction rates for users of DOD’s legacy systems and users of the same commercial EHR solution as DOD. Specifically, benchmarking data provided by DOD’s survey analysis contractor showed that DOD’s satisfaction rate ranked last among the rates of all measured entities, with the exception of satisfaction rates for downtime.

Patient-centered care. About 35 and 39 percent of MHS GENESIS users in 2022 and 2023, respectively, agreed that the system enabled patient-centered care compared to 56 percent of legacy system users and 46 percent of private-sector users of the same commercial system as DOD. See figure 1 for additional details on these comparisons.

Figure 1: Comparison of Patient-Centered Care Results



Source: GAO summary of Department of Defense information. | GAO-24-106187

Accessible Data Table for Figure 2: Comparison of Patient-Centered Care Results

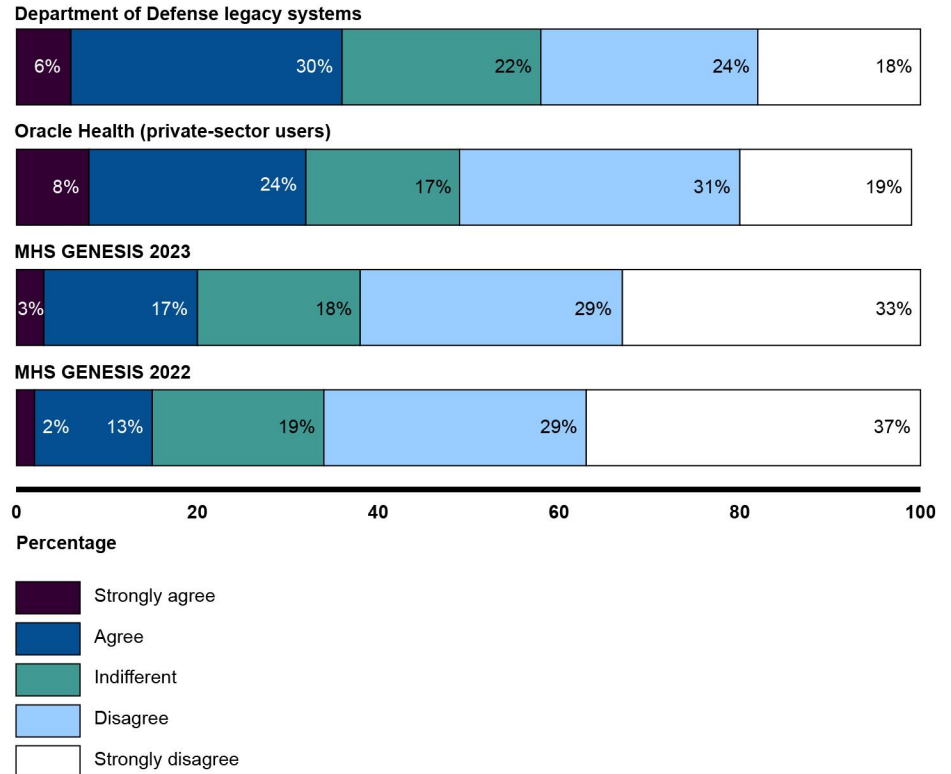
Patient-Centered Care	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
DOD Legacy Systems	11	45	22	14	8
Oracle-Cerner U.S.	9	37	28	16	9
MHS GENESIS 2023	6	33	29	18	14
MHS GENESIS 2022	5	30	29	21	16

Source: GAO summary of Department of Defense information. | GAO-24-106187

Note: Totals may not add to 100 percent due to rounding. Department of Defense legacy system data come from 2022 survey results. Oracle Health, MHS GENESIS 2023, and MHS GENESIS 2022 data come from 2023 survey results.

Efficiency. In 2022 and 2023, 15 and 20 percent of MHS GENESIS users, respectively, agreed the electronic health record made them as efficient as compared to 36 percent of legacy system users and 32 percent of private-sector users of the same commercial system as DOD. See figure 2 for additional details on these comparisons.

Figure 3: Comparison of Efficiency Results



Source: GAO summary of Department of Defense information. | GAO-24-106187

Accessible Table Data for Figure 4: Comparison of Efficiency Results

Entity	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
DOD Legacy Systems	6	30	22	24	18
Oracle-Cerner U.S.	8	24	17	31	19

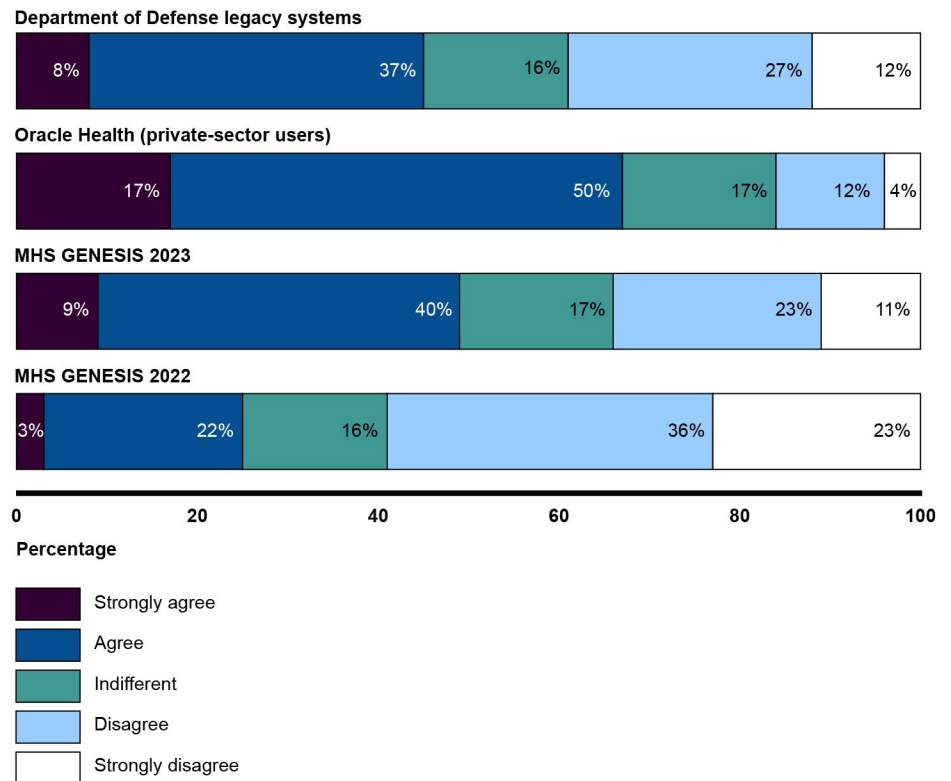
Entity	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
MHS GENESIS 2023	3	17	18	29	33
MHS GENESIS 2022	2	13	19	29	37

Source: GAO summary of Department of Defense information. | GAO-24-106187

Note: Totals may not add to 100 percent due to rounding. Department of Defense legacy system data come from 2022 survey results. Oracle Health, MHS GENESIS 2023, and MHS GENESIS 2022 data come from 2023 survey results.

Downtime. In 2023, 49 percent of users indicated that the electronic health record was available when needed and that downtime was not a problem. This was almost double the amount reported in 2022 (25 percent). The 2023 survey numbers surpassed those of legacy system respondents, which was 45 percent. Nevertheless, these responses lagged behind the 67 percent of private-sector users of the same commercial system as DOD who indicated that downtime was not a problem. See figure 3 for additional details on these comparisons.

Figure 5: Comparison of Downtime Results



Source: GAO summary of Department of Defense information. | GAO-24-106187

Accessible Data Table for Figure 6: Comparison of Downtime Results

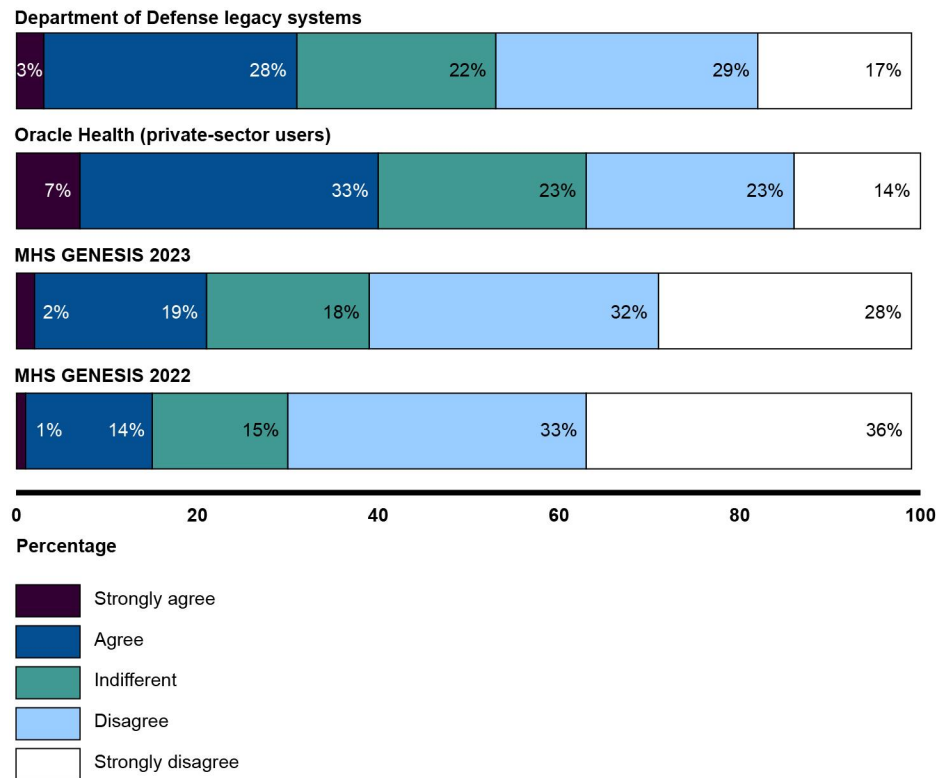
Entity	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
DOD Legacy Systems	8	37	16	27	12
Oracle-Cerner U.S.	17	50	17	12	4
MHS GENESIS 2023	9	40	17	23	11
MHS GENESIS 2022	3	22	16	36	23

Source: GAO summary of Department of Defense information. | GAO-24-106187

Note: Totals may not add to 100 percent due to rounding. Department of Defense legacy system data come from 2022 survey results. Oracle Health, MHS GENESIS 2023, and MHS GENESIS 2022 data come from 2023 survey results.

Response time. In 2022 and 2023, 15 and 21 percent of MHS GENESIS users, respectively, agreed the electronic health record had a fast response time compared to 31 percent of legacy system users and 40 percent of private-sector users of the same commercial system as DOD. See figure 4 for additional details on these comparisons.

Figure 7: Comparison of Response Time Results



Source: GAO summary of Department of Defense information. | GAO-24-106187

Accessible Data Table for Figure 8: Comparison of Response Time Results

Entity	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
DOD Legacy Systems	3	28	22	29	17
Oracle-Cerner U.S.	7	33	23	23	14
MHS GENESIS 2023	2	19	18	32	28

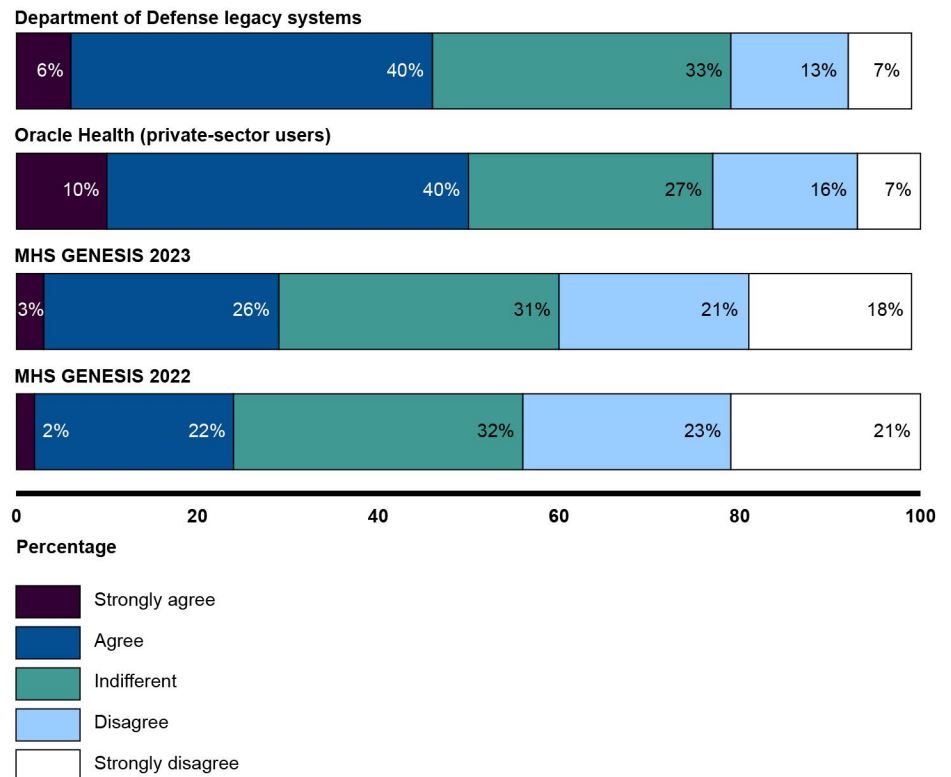
Entity	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
MHS GENESIS 2022	1	14	15	33	36

Source: GAO summary of Department of Defense information. | GAO-24-106187

Note: Totals may not add to 100 percent due to rounding. Department of Defense legacy system data come from 2022 survey results. Oracle Health, MHS GENESIS 2023, and MHS GENESIS 2022 data come from 2023 survey results.

Quality care. In 2022 and 2023, 24 and 29 percent of MHS GENESIS users, respectively, agreed that the electronic health record enables them to deliver high quality care, compared to 46 percent of legacy system users and 50 percent of private-sector users of the same commercial system as DOD. See figure 5 for additional details on these comparisons.

Figure 9: Comparison of Quality Results



Source: GAO summary of Department of Defense information. | GAO-24-106187

Accessible Table Data for Figure 10: Comparison of Quality Results

Entity	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
DOD Legacy Systems	6	40	33	13	7
Oracle-Cerner U.S.	10	40	27	16	7
MHS GENESIS 2023	3	26	31	21	18
MHS GENESIS 2022	2	22	32	23	21

Source: GAO summary of Department of Defense information. | GAO-24-106187

Note: Totals may not add to 100 percent due to rounding. Department of Defense legacy system data come from 2022 survey results. Oracle Health, MHS GENESIS 2023, and MHS GENESIS 2022 data come from 2023 survey results.

DOD Has Not Established Goals for Improving User Satisfaction

GAO¹⁵ and federal IT guidance¹⁶ recognize the importance of defining program goals and related performance targets and using such targets to assess progress toward goals. Also, leading practices identify continuous customer feedback as a crucial element of IT project success, from project conception through sustainment. IT programs with ongoing development activities, like MHS GENESIS, can solicit customer (i.e., end user) perspectives and insights through various methods, including interviews and satisfaction surveys. Programs can use these perspectives to validate or raise questions about the project's implementation. Further, leading practices emphasize proactively employing user satisfaction data to improve performance and monitor progress toward goals to understand whether user needs have been met.

DOD has not yet established goals or plans to improve survey results. Officials stated that this was because the department focused its priorities on deploying the system to all sites and ensuring patient safety. While these are important priorities, until DOD also establishes targets (i.e., goals) for improving user satisfaction, the department will be limited in its ability to objectively measure progress, plan for improvements, and ensure that the system optimally meets the users' needs.

DOD Has a Plan to Manage Issues but Has Not Resolved Dental Module Problems

The department's Program Executive Office Risk and Issue Management Plan describes the detailed processes, responsibilities, tools, and techniques for identifying, analyzing, monitoring, and responding to issues.¹⁷ Specifically, the plan outlines response strategies for program

¹⁵GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, [GAO-04-394G](#) (Washington, D.C.: March 2004).

¹⁶Office of Management and Budget, *Evaluating Information Technology Investments, A Practical Guide* (November 1995); Office of Management and Budget, *Preparation, Submission, and Execution of the Budget*, Circular No. A-11 (August 2022); and General Services Administration, *Modernization and Migration Management (M3) Playbook*, accessed Oct. 20, 2022, <https://www.ussm.gov/m3>.

¹⁷Department of Defense, *Program Executive Office Risk and Issue Management Plan* (Washington, D.C.: October 2016).

leadership, so that officials can prioritize and act to resolve issues. According to the department's plan, once an issue is identified, it is to be entered into a register for tracking purposes. The department then is to assess the issue to determine its impact to the program and document response strategies.¹⁸ Additionally, issues are to be monitored to ensure that they are resolved in an appropriate and timely manner.

The program office has implemented its issue management plan to track and resolve long-standing issues, but it has been unable to resolve persistent problems with the dental module, Dentrrix. Specifically, the program is following its issue management plan by maintaining a register of these issues. The register incorporates information such as the title, description, and impact of each issue and describes the steps planned to address them. Additionally, the program office has monitored these issues at monthly program management meetings. For example:

- In November 2022, the program office identified a severe issue in which the department's enrollment and eligibility reporting system was not achieving 97 percent availability, as required. As a result, patient demographic data had to be entered into the system manually, health plans could not be validated, and billing was delayed, among other things. The program office identified several steps to resolve this issue. These included assessing the architecture that supports the eligibility system, increasing the amount of time between requests, and testing these changes for efficacy. In July 2023, the program office reduced the impact of this issue from severe to moderate. The office noted that the enrollment and eligibility reporting system's services had been available without interruption for nearly 10 consecutive weeks and that the issue would be monitored as part of normal operations.
- In September 2022, the program office identified a severe issue in which network delays due to the distance between certain overseas locations and the U.S. data center were adversely impacting the user experience at these locations. As a result, there was concern that

¹⁸The plan identified five categories of impact: severe, significant, moderate, minor, and negligible. A severe issue will impact desired results to the extent that one or more of its critical outcome objectives will not be achieved. A significant issue will impact desired results to the extent that one or more of its stated outcome objectives will fall below minimum acceptable levels. A moderate issue will impact desired results to the extent that one or more of its stated outcome objectives will fall well below minimum acceptable levels. A minor issue will impact desired results to the extent that one or more of its stated outcome objectives will fall below goals but well above minimum acceptable levels. A negligible issue will have little to no impact on achieving outcome objectives.

overseas users would not be able to effectively use the system once it was deployed. The program office identified several steps to resolve this issue. These included identifying the overseas deployment sites' network connections, identifying alternate methods to resolve the network delays, and pursuing optimization of the MHS GENESIS application, network, and local device configurations. As of September 2023, the program office has reduced the impact of this issue from severe to minor and has completed all system optimizations.

Although the program office has identified issues and taken steps to resolve them, the office has been unable to correct problems with the dental module, Dentrix. Specifically, the Dentrix module has issues associated with its inability to support an increased number of dental users. Problems with the module began as early as October 2018, and the office began tracking them in its monthly program management meetings as early as July 2019.

During deployments in September 2019, Dentrix users experienced excessive delays, and an interface between Dentrix and other components of the EHR was turned off. This resulted in increased system stability but caused system capabilities to become minimally functional since the interface supported critical functionality. In October 2019, the program had a roadmap to improving Dentrix that sought to implement the necessary fixes by June 2020. However, that effort was unsuccessful, and the risk was elevated to a significant issue in March 2021, then to a severe issue in July 2023.

According to the program office, the Dentrix vendor has a "systemic inability to deliver fundamental capability on schedule and on budget." The office also stated that the vendor needs to improve its software development and quality assurance practices because these practices have allowed code defects and errors. In addition, each release of Dentrix has failed scalability testing when the interface is enabled.

The program office stated that it has begun working with the Leidos Partnership to identify alternatives to Dentrix. However, as of November 2023, there were no dates or estimates as to when the Dentrix issue will be resolved or a plan or schedule for identifying alternatives. As of January 2024, the program office stated that the Dentrix vendor would not be able to provide an interface needed to provide critical functionality. Accordingly, the issue is still not resolved, and the impact remains severe. Until the program office identifies an alternative approach to resolving the

Dentrix issue, MHS GENESIS will not provide critical functionality to dentists who are treating service members and other DOD beneficiaries.

Conclusions

By completing critical deployment activities outlined in its implementation plan, DOD deployed its new EHR at all its medical facilities. Nevertheless, challenges remain in three key areas.

First, although DOD has implemented the federal EHR at the FHCC together with VA, it has not identified and addressed specific legal and policy barriers. Until the departments do so, they risk not achieving the goal of fully integrating their joint facility.

Second, although two DOD surveys of its EHR system users indicate that satisfaction with the system has generally improved between 2022 and 2023, satisfaction rates for users of MHS GENESIS lag behind rates for legacy system users and for non-DOD users of the same commercial product. Additionally, DOD has not established goals for user satisfaction, potentially limiting its ability to objectively measure progress, plan for improvements, and ensure the system meets the users' needs.

Third, DOD has followed an issue management process that has led to most issues being successfully managed. However, despite significant efforts to address ongoing problems with the dental module, it has continuously failed scalability testing, resulting in a vital interface for sharing patient dental and medical records in the system being turned off. Without a dental module that enables clinicians to access shared dental and medical records, MHS GENESIS is unable to provide important functionality to fully meet service members' health care needs.

Addressing these challenges will help DOD improve its EHR and ultimately ensure that the system more effectively supports the provision of health care across the department.

Recommendations for Executive Action

We are making a total of four recommendations, including three to DOD and one to VA. Specifically:

The Secretary of Defense should direct the Federal EHR Modernization Office to identify and address specific barriers to maximizing integration at the FHCC, consistent with the FHCC executive agreement. (Recommendation 1)

The Secretary of Defense should direct the Defense Health Agency Health Informatics organization in conjunction with the Program Executive Officer of Defense Healthcare Management Systems to establish MHS GENESIS user satisfaction targets (i.e., goals) and ensure that the system demonstrates improvement toward meeting those targets. (Recommendation 2)

The Secretary of Defense should direct the Program Executive Officer of Defense Healthcare Management Systems to develop and implement a plan to provide an alternative to the MHS GENESIS dental module. (Recommendation 3)

The Secretary of Veterans Affairs should direct the Federal EHR Modernization Office to identify and address specific barriers to maximizing integration at the FHCC, consistent with the FHCC executive agreement. (Recommendation 4)

Agency Comments and Our Evaluation

We provided a draft of this report to DOD and VA for review and comment. DOD and VA provided written comments that are reprinted in appendixes II and III, respectively, and summarized below. DOD and VA also provided technical comments, which we addressed, as appropriate.

In its comments, DOD concurred with recommendation 1 and partially concurred with recommendations 2 and 3. Regarding recommendation 2, DOD commented that the Defense Health Agency Health Informatics organization is responsible for establishing user satisfaction targets and concurred that the Program Executive Officer of Defense Healthcare Management Systems has responsibility for ensuring that targets are met. We clarified recommendation 2 to reflect these responsibilities. With respect to recommendation 3, the department stated that it is currently conducting an analysis of alternatives regarding the MHS GENESIS dental module. VA concurred with recommendation 4 and stated that it plans to address the recommendation by directing the Federal EHR Modernization Office to identify and address specific integration barriers.

We are sending copies of this report to appropriate congressional committees, the Secretary of Defense, and the Secretary of Veterans Affairs. In addition, the report is available at no charge on GAO's website at <https://www.gao.gov>.

If you or your staffs have any questions about this report, please contact me at (202) 512-4456 or harriscc@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix IV.

A handwritten signature in black ink, appearing to read "C. Harris", with a long horizontal flourish extending to the right.

Carol C. Harris
Director, Information Technology Acquisition Management Issues

Appendix I: Objectives, Scope, and Methodology

The Consolidated Appropriations Act, 2022 and the Consolidated Appropriations Act, 2023 included provisions for GAO to review the Department of Defense's (DOD) electronic health record (EHR) deployment.¹ Our objectives for this review were to determine (1) the progress DOD and VA have made toward implementing the federal electronic health record system at the James A. Lovell Federal Health Care Center (FHCC), (2) the extent to which DOD has identified user satisfaction with the system, and (3) the extent to which DOD has managed key issues affecting system implementation.

To address the first objective, we obtained and reviewed plans for implementing the new federal EHR at the FHCC and information describing the steps being taken by DOD and VA. Specifically, we reviewed the implementation summary, management presentations on the status of the program, and documentation describing roles and responsibilities for the various organizations responsible for deployment. We also reviewed documentation describing the requirements process and the outcomes of that process. In addition, we had discussions with officials from the Federal EHR Modernization Office, the FHCC, VA, and DOD on the status of the deployment. We also spoke with an official from the union representing non-nursing staff, such as physicians, physician assistants, and pharmacists at the FHCC.

We also conducted a site visit to the FHCC and met with staff involved with the deployment to determine the progress being made and any challenges that they were facing. Specifically, we met with FHCC leadership, the adoption team, the site activation team, the informatics steering committee, requirements management staff, dental staff, clinicians, and nurses.

To address the second objective, we obtained and reviewed results of surveys that DOD conducted to determine users' satisfaction with the new system and an analysis of the survey data conducted by DOD's survey

¹Consolidated Appropriations Act, 2022, Pub. L. No. 117-103, Title VI, 136 Stat. 49, 171 (2022). Consolidated Appropriations Act, 2023, Title VI, Pub. L. No. 117-328, 136 Stat. 4459, 4853 (2022).

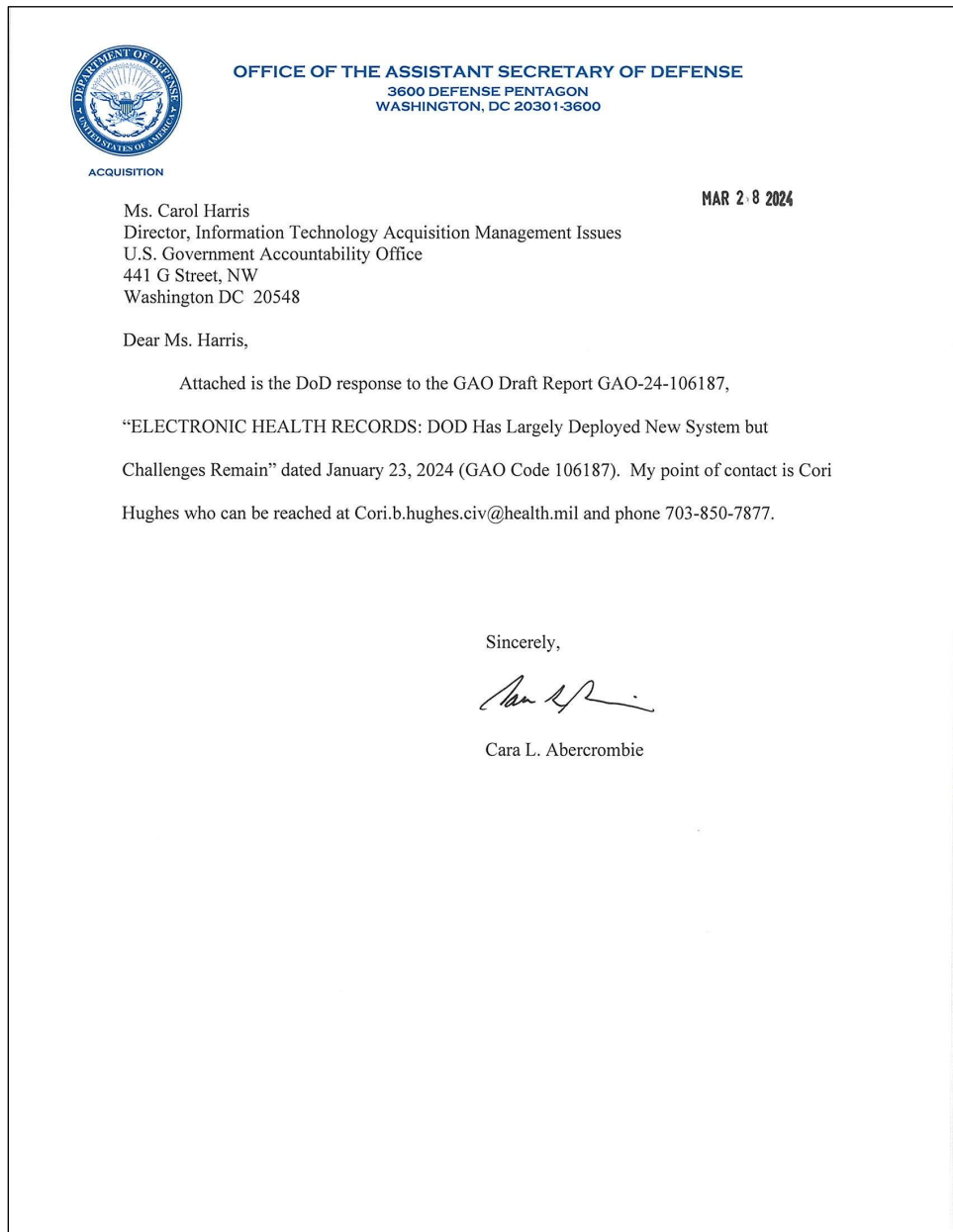
analysis contractor. The survey analysis contractor analyzed the responses and compared them to other entities for which they had data. This included more than 380,000 survey responses from over 297 provider organizations in more than 12 countries. The data also included user satisfaction results from users of DOD's legacy systems.

We further obtained documentation regarding the department's administration of its user satisfaction surveys and met with program officials and analysis contractor staff to determine that the data were sufficiently reliable for our purposes. We discussed DOD's survey response rates of 12.9 percent for the 2022 survey and 4.6 percent for the 2023 survey with the survey analysis contractor. The contractor acknowledged that these response rates are below their 20 percent goal. However, according to the contractor, the 2022 response rate was consistent with surveys of large EHR deployments. Regardless of the low survey response rates, we believe that reporting DOD's results is important because they were obtained in response to a legislative requirement and the department plans to publicly report the results. We also obtained information from program officials to determine whether the department had established any goals for user satisfaction.

To address the third objective, we selected long-standing issues related to the benefits eligibility system, overseas deployment of the new EHR, and the dental module included with the new EHR. We also reviewed the program's risk management plan and monthly risk register and began tracking progress on these issues in October 2022. Additionally, we observed monthly program management meetings where top program risks were discussed. We also met with officials who served as points of contact for these issues.

We conducted this performance audit from August 2022 to April 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Comments from the Department of Defense



**Appendix II: Comments from the Department
of Defense**

**GOVERNMENT ACCOUNTABILITY OFFICE (GAO) DRAFT REPORT DATED
JANUARY 23, 2024
GAO-24-106187 (GAO CODE 106187)**

**“ELECTRONIC HEALTH RECORDS: DOD Has Largely Deployed New System but
Challenges Remain”**

**DEPARTMENT OF DEFENSE COMMENTS
TO THE GAO RECOMMENDATION**

RECOMMENDATION 1: The GAO recommends that the Secretary of Defense should direct the Federal EHR Modernization Office to identify and address specific barriers to maximizing integration of the FHCC, consistent with the FHCC executive agreement. (Recommendation 1)

DOD RESPONSE: Concur.

RECOMMENDATION 2: The GAO recommends that the Secretary of Defense should direct the Program Executive Officer of Defense Health Management Systems to establish MHS GENESIS user satisfaction targets (i.e., goals) and ensure that the system demonstrates improvement toward meeting those targets. (Recommendation 2)

DOD RESPONSE: Partially concur: The Defense Health Agency (DHA) Health Informatics (HI) organization is responsible for establishing “user satisfaction targets (i.e., goals)”, not the Program Executive Officer Defense Healthcare Management Systems (PEO DHMS). PEO DHMS concurs with point two of this recommendation “the Secretary of Defense should direct the Program Executive Officer of Defense Health Management Systems to ... ensure that the system demonstrates improvement toward meeting those targets.”

A primary goal of Program Executive Office Defense Healthcare Management Systems (PEO DHMS) is to provide value-added modernizations for our users. To help drive a positive user experience, PEO DHMS currently collaborates with the Federal Electronic Health Record Modernization Office (FEHRM) and the Defense Health Agency (DHA) Health Informatics (HI) to obtain end user perspectives on MHS GENESIS and strives to improve the end user’s experience.

As the DOD Healthcare Management System Modernization (DHMSM) Program Management Office (PMO) completes our deployment phase in 2024, we are transitioning to an optimization phase of the program to enhance the end user experience and implement deployment lessons learned for this next phase. We are focusing on the Patient Experience by designing products around the end user and tailoring offerings to their needs. To support this, we have transitioned to a product-centric organization comprised of three main teams: the Products Teams that determines what work is done and sets the vision for how products can enhance patient care, the Platform Teams that determine how the work is done and execute the vision of the Product Teams, and the Supporting Functions Teams that enable programmatic success.

**Appendix II: Comments from the Department
of Defense**

2

Several key initiatives will improve the end user experience:

- a. DHMSM is using objectives and key results with four established goals, one of which is focused on end user satisfaction. This industry best practice provides visibility into our progress in meeting the goals, enabling us to take corrective action as we work to achieve the goals.
- b. Continuous capability enhancement and increased system availability, to include mean time to repair and mean time between failures, are other areas of focus DHMSM works to positively impact the end user experience.
- c. DHMSM is collaborating with DHA HI and their End User Engagement team to conduct repeatable surveys with end users. These surveys measure our success in meeting the user need and help us understand how end users feel about the improvements and system overall.

RECOMMENDATION 3: The GAO recommends that the Secretary of Defense should direct the Program Executive Officer of Defense Health Management Systems to develop and implement a plan to provide an alternative to the MHS GENESIS dental module. (Recommendation 3)

DOD RESPONSE: Partially concur. When DHMSM started this endeavor, no medical record existed that included dental at this scale. At that time, we performed an Analysis of Alternatives (AoA) and selected the best of breed solution. Since then, DHMSM has conducted additional AoAs to ensure that we are using the optimal solution available. Together, DHMSM, Leidos Partnership for Defense Health, and the vendor seek continuous improvement through ongoing collaboration. We are currently conducting another AoA with the DHA Functional Community to explore new solutions regarding an MHS GENESIS dental module that may better drive efficiency for the users and meet dental requirements.

Please note in the draft report to change "Defense Health Management Systems" to "Defense Healthcare Management Systems"; and "Defense Healthcare Management System Modernization Program Management Office" to "DOD Healthcare Management System Modernization Program Management Office".

Accessible Text for Appendix II: Comments from the Department of Defense

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3600 DEFENSE PENTAGON
WASHINGTON, DC 2 0301 -3600

ACQUISITION

Ms. Carol Harris
Director, Information Technology Acquisition Management Issues
U.S. Government Accountability Office
441 G Street, NW
Washington DC 20548

Dear Ms. Harris,
Attached is the DoD response to the GAO Draft Report GAO-24-1 06187,
"ELECTRONIC HEALTH RECORDS: DOD Has Largely Deployed New System but
Challenges Remain" dated January 23, 2024 (GAO Code 106 187). My point of
contact is Cori Hughes who can be reached at Cori.b.hughes.civ@health.mil and
phone 703-850-7877.

Sincerely,
Cara L. Abercrombie

GOVERNMENT ACCOUNTABILITY OFFICE (GAO) DRAFT REPORT DATED JANUARY 23, 2024 GAO-24-106187 (GAO CODE 106187)

"ELECTRONIC HEALTH RECORDS: DOD Has Largely Deployed New System but
Challenges Remain"

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATION

RECOMMENDATION 1: The GAO recommends that the Secretary of Defense
should direct
the Federal EHR Modernization Office to identify and address specific barriers to
maximizing integration of the FHCC, consistent with the FHCC executive agreement.
(Recommendation 1)

DOD RESPONSE: Concur.

RECOMMENDATION 2: The GAO recommends that the Secretary of Defense should direct the Program Executive Officer of Defense Health Management Systems to establish MHS GENESIS user satisfaction targets (i.e., goals) and ensure that the system demonstrates improvement toward meeting those targets.(Recommendation 2)

DOD RESPONSE: Partially concur: The Defense Health Agency (DHA) Health Informatics (HI) organization is responsible for establishing "user satisfaction targets (i.e., goals)", not the Program Executive Officer Defense Healthcare Management Systems (PEO DHMS). PEO DHMS concurs with point two of this recommendation "the Secretary of Defense should direct the Program Executive Officer of Defense Health Management Systems to . ensure that the system demonstrates improvement toward meeting those targets."

A primary goal of Program Executive Office Defense Healthcare Management Systems (PEO DHMS) is to provide value-added modernizations for our users. To help drive a positive user experience, PEO DHMS currently collaborates with the Federal Electronic Health Record Modernization Office (FEHRM) and the Defense Health Agency (DHA) Health Informatics (HI) to obtain end user perspectives on MHS GENESIS and strives to improve the end user's experience.

As the DOD Healthcare Management System Modernization (DHMSM) Program Management Office (PMO) completes our deployment phase in 2024, we are transitioning to an optimization phase of the program to enhance the end user experience and implement deployment lessons learned for this next phase. We are focusing on the Patient Experience by designing products around the end user and tailoring offerings to their needs. To support this, we have transitioned to a product-centric organization comprised of three main teams: the Products Teams that determines what work is done and sets the vision for how products can enhance patient care, the Platform Teams that determine how the work is done and execute the vision of the Product Teams, and the Supporting Functions Teams that enable programmatic success.

Several key initiatives will improve the end user experience:

- a. DHMSM is using objectives and key results with four established goals, one of which is focused on end user satisfaction. This industry best practice provides visibility into our progress in meeting the goals, enabling us to take corrective action as we work to achieve the goals.
- b. Continuous capability enhancement and increased system availability, to include mean time to repair and mean time between failures, are other areas of focus DHMSM works to positively impact the end user experience.

c. DHMSM is collaborating with DHA HI and their End User Engagement team to conduct repeatable surveys with end users. These surveys measure our success in meeting the user need and help us understand how end users feel about the improvements and system overall.

RECOMMENDATION 3: The GAO recommends that the Secretary of Defense should direct the Program Executive Officer of Defense Health Management Systems to develop and implement a plan to provide an alternative to the MHS GENESIS dental module. (Recommendation 3)

DOD RESPONSE: Partially concur. When DHMSM started this endeavor, no medical record existed that included dental at this scale. At that time, we performed an Analysis of Alternatives (AoA) and selected the best of breed solution. Since then, DHMSM has conducted additional AoAs to ensure that we are using the optimal solution available. Together, DHMSM, Lei dos Partnership for Defense Health, and the vendor seek continuous improvement through ongoing collaboration. We are currently conducting another AoA with the DHA Functional Community to explore new solutions regarding an MHS GENESIS dental module that may better drive efficiency for the users and meet dental requirements.

Please note in the draft report to change "Defense Health Management Systems" to "Defense Healthcare Management Systems"; and "Defense Healthcare Management System Modernization Program Management Office" to "DOD Healthcare Management System Modernization Program Management Office"

Appendix III: Comments from the Department of Veterans Affairs



DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON

February 26, 2024

Ms. Carol C. Harris
Director
Information Technology and Cybersecurity Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Harris:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: ***Electronic Health Records: DOD Has Largely Deployed New System but Challenges Remain*** (GAO-24-106187).

The enclosure contains a technical comment and the action plan to address the draft report recommendation. VA appreciates the opportunity to comment on your draft report.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kimberly Jackson".

Kimberly Jackson
Chief of Staff

Enclosure

Appendix III: Comments from the Department
of Veterans Affairs

Enclosure

Department of Veterans Affairs (VA) Comments to
Government Accountability Office (GAO) Draft Report
***Electronic Health Records: DOD Has Largely Deployed
New System but Challenges Remain***
(GAO-24-106187)

Recommendation 4: The Secretary of Veteran Affairs should direct the Federal EHR Modernization Office to identify and address specific barriers to maximizing integration of the FHCC, consistent with the FHCC executive agreement.

VA Response: Concur. The Secretary of Veteran Affairs will engage with the Federal Electronic Health Record Modernization (EHR) Office and direct the Federal EHR Modernization Office to identify and address specific barriers to maximizing integration of the Federal Health Care Center (FHCC), consistent with the FHCC executive agreement.

Target Completion Date: April 2024

Accessible Text for Appendix III: Comments from the Department of Veterans Affairs

DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON
February 26, 2024

Ms. Carol C. Harris
Director
Information Technology and Cybersecurity Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Harris:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: *Electronic Health Records: DOD Has Largely Deployed New System but Challenges Remain* (GAO-24-106187).

The enclosure contains a technical comment and the action plan to address the draft report recommendation. VA appreciates the opportunity to comment on your draft Report.

Sincerely,
Kimberly Jackson
Chief of Staff

Enclosure

Department of Veterans Affairs (VA) Comments to
Government Accountability Office (GAO) Draft Report
*Electronic Health Records: DOD Has Largely Deployed
New System but Challenges Remain*
(GAO-24-106187)

Recommendation 4: The Secretary of Veteran Affairs should direct the Federal EHR Modernization Office to identify and address specific barriers to maximizing integration of the FHCC, consistent with the FHCC executive agreement

VA Response: Concur. The Secretary of Veteran Affairs will engage with the Federal Electronic Health Record Modernization (EHR) Office and direct the Federal HER Modernization Office to identify and address specific barriers to maximizing integration of the Federal Health Care Center (FHCC), consistent with the FHCC executive agreement.

Target Completion Date: April 2024

Appendix IV: GAO Contacts and Staff Acknowledgments

GAO Contact

Carol C. Harris (202) 512-4456 or harriscc@gao.gov

Staff Acknowledgments

In addition to the individual named above, the following staff made key contributions to this report: Mark Bird (Assistant Director), Thomas Murphy (Analyst in Charge), Lauri Barnes, Christopher Businsky, Alex Engel, Cynthia Grant, Christy Ley, Jess Lionne, Monica Perez-Nelson, Darron Smallwood, Teresa Smith, Christy Tyson, and Walter Vance.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through our website. Each weekday afternoon, GAO posts on its [website](#) newly released reports, testimony, and correspondence. You can also [subscribe](#) to GAO's email updates to receive notification of newly posted products.

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <https://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#).
Subscribe to our [RSS Feeds](#) or [Email Updates](#). Listen to our [Podcasts](#).
Visit GAO on the web at <https://www.gao.gov>.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact FraudNet:

Website: <https://www.gao.gov/about/what-gao-does/fraudnet>

Automated answering system: (800) 424-5454 or (202) 512-7700

Congressional Relations

A. Nicole Clowers, Managing Director, ClowersA@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

Strategic Planning and External Liaison

Stephen J. Sanford, Managing Director, spel@gao.gov, (202) 512-4707
U.S. Government Accountability Office, 441 G Street NW, Room 7814,
Washington, DC 20548



Please Print on Recycled Paper.