



INSPECTOR GENERAL

U.S. Department of Defense

MAY 5, 2022



Management Advisory: DoD Health Care Provider Concerns Regarding the Access to Complete and Accurate Electronic Health Records







**INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500**

May 5, 2022

MEMORANDUM FOR DIRECTOR, DEFENSE HEALTH AGENCY

**SUBJECT: Management Advisory on DoD Health Care Provider Concerns Regarding
the Access to Complete and Accurate Electronic Health Records
(Report No. DODIG-2022-090)**

The purpose of this management advisory is to provide the Defense Health Agency (DHA) Director with concerns identified by DoD health care providers in response to a survey we administered during the Joint Audit of the Department of Defense and Department of Veterans Affairs Efforts to Achieve Electronic Health Record Interoperability (Project No. D2020-D000CR-0092.000). The survey was administered to DoD health care providers at eight DoD medical treatment facilities (MTF) and contained 23 questions concerning access to the DoD's electronic health care system and the accuracy and completeness of the information contained in that system. We conducted the survey with integrity, objectivity, and independence, as required by the Council of the Inspectors General for Integrity and Efficiency's Quality Standards for Federal Offices of Inspector General.

We provided a draft copy of this advisory to the DHA Director and requested written comments on the findings and recommendation. Comments from the DHA Director addressed the recommendation; therefore, we consider the recommendation resolved but open. As discussed in the Recommendations, Management Comments, and Our Response section of this advisory, the recommendation will remain open until documentation is submitted showing that the agreed upon action is complete. Once we verify that the action is complete, we will close the recommendation. Please provide us within 90 days documentation showing that the agreed upon action is complete. Send the documentation to [REDACTED] if unclassified or [REDACTED] if classified SECRET.

We appreciate the cooperation and assistance received during the survey. Please direct comments to me at [REDACTED].

A handwritten signature in cursive script, reading "Carol N. Gorman", is positioned above the typed name.

Carol N. Gorman
Assistant Inspector General for Audit
Cyberspace Operations



Background

On February 24, 2020, we announced the “Joint Audit of the Department of Defense and Department of Veterans Affairs Efforts to Achieve Electronic Health Record Interoperability,” (Project No. D2020-000CR-0092.000). The objective of that audit was to determine the extent to which the actions taken by the DoD and Department of Veterans Affairs (VA) in acquiring and implementing a common, commercial electronic health record (EHR) system and supporting architecture will achieve interoperability between DoD, VA, and external health care providers.¹

During the joint audit, we administered a survey to understand the experiences of DoD health care providers who access EHRs using the DoD’s new EHR system—Military Health System (MHS) GENESIS.² EHRs are real-time, digital, patient-centered records that:

- contain a patient’s medical history, diagnoses, medications, treatment plans, immunization dates, allergies, radiology images, and laboratory and test results;
- allow access to clinical tools, such as real-time reporting, that health care providers can use to make decisions about a patient’s care; and
- automate and streamline health care provider workflows to provide timely treatment.

One of the key features of an EHR is that health care providers can share a patient’s health care information with other providers across and outside of their health care organization using EHR systems such as MHS GENESIS.

The DoD started deploying MHS GENESIS to DoD military MTFs in 2017, with plans to complete the deployment of MHS GENESIS to all of its 490 military MTFs by 2023. As of December 2021, the DoD has deployed MHS GENESIS at 49 of its 490 military MTFs. Until the DoD fully deploys MHS GENESIS and migrates all necessary health care information from the DoD legacy EHR systems to MHS GENESIS, DoD health care providers rely heavily on the use of the Joint Longitudinal Viewer (JLV) to augment the information contained in MHS GENESIS.³ The JLV is an application that searches DoD and VA legacy EHR systems and retrieves patient health care information for display within the JLV application.

¹ External health care providers are commercial facilities and physicians who provide health care to DoD and VA patients.

² The DoD purchased MHS GENESIS from the Leidos Corporation. The core of MHS GENESIS is the Cerner Corporation’s Cerner Millennium EHR system.

³ Legacy EHR systems are the DoD EHR systems that MHS GENESIS will replace. The DoD legacy EHR systems include the Armed Forces Health Longitudinal Technology Application, Composite Health Care System, and Essentris.

Survey Methodology

We administered the survey in October 2020 to 7,378 DoD health care providers at eight DoD MTFs. We received 701 responses for a response rate of 9.5 percent. The survey consisted of 23 questions focused on the:

- ability to access DoD and VA patient health care information in MHS GENESIS and external systems;⁴
- accuracy and completeness of DoD and VA patient health care information in MHS GENESIS and external systems; and
- accuracy and completeness of DoD and VA patient health care information transferred from medical devices to MHS GENESIS.

The survey was voluntary, and the respondents could leave the survey at any time. We designed the survey to allow respondents to skip irrelevant questions based on their previous answers; therefore, not every respondent answered every question.

DoD Health Care Provider Concerns Regarding the Access to Complete and Accurate Electronic Health Records

The DoD health care provider responses to the survey identified concerns regarding the ability to access patient health care information; the accuracy and completeness of that information; and the accuracy and completeness of patient health care information from medical devices. The responses also identified the type of information that the DoD health care providers considered inaccurate and incomplete; the other means the health care providers used to obtain health care information; and the impact on patient care.

Accuracy and Completeness of Patient Health Care Records

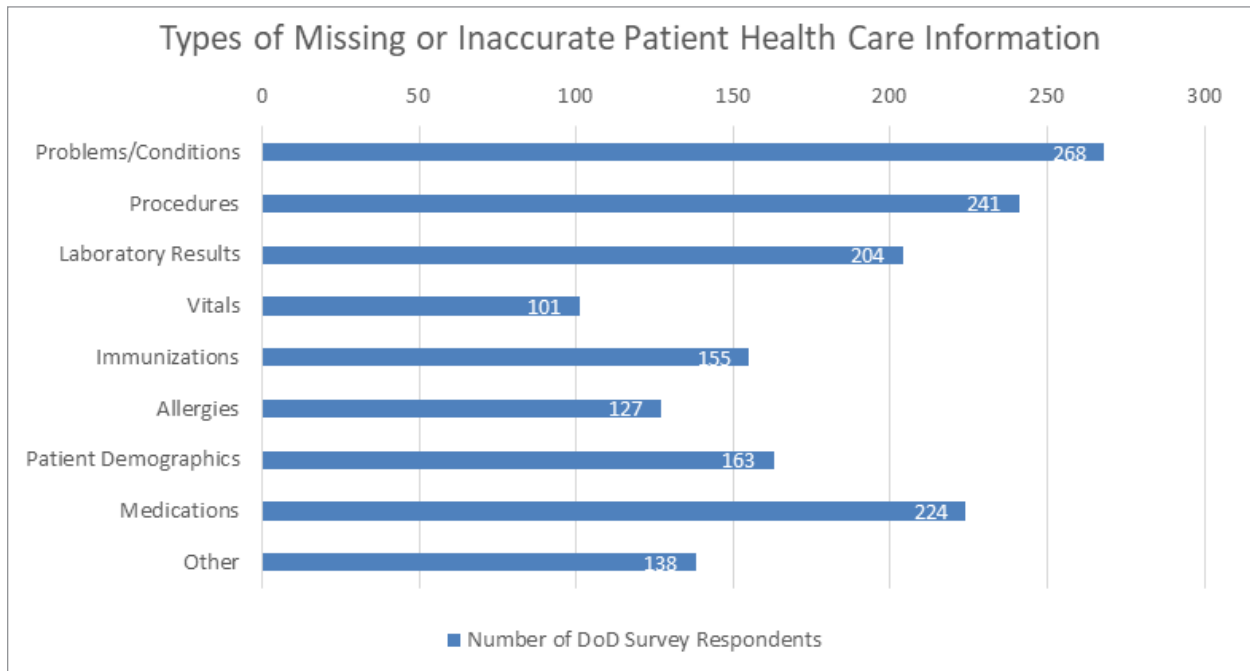
DoD health care providers indicated that patient health care information in MHS GENESIS and the external systems was not always accurate or complete. Of the 701 DoD survey respondents, 405 (57.8 percent) identified concerns with the accuracy and completeness of the EHRs. Specifically:

- 260 of 285 (91.2 percent) DoD survey respondents identified inaccurate or incomplete DoD patient health care information in MHS GENESIS;
- 172 of 255 (67.5 percent) DoD survey respondents identified inaccurate or incomplete VA patient health care information in MHS GENESIS; and
- 248 of 392 (63.3 percent) DoD survey respondents identified inaccurate or incomplete patient health care information from external systems.

⁴ For the purposes of this memorandum, external systems refers to JLV, e-mail, fax, and other systems external to MHS GENESIS used by health care providers to obtain a patient's health care records.

If the respondents answered yes to questions related to the accuracy or completeness of EHRs, the survey directed respondents to identify the types of information that they considered inaccurate or incomplete. The survey question contained a list of nine types of information (including “other”), and the survey instructed the respondents to select all types that applied. Figure 1 illustrates the results by information type.

Figure 1. Types of Patient Health Care Information Reported as Inaccurate or Incomplete



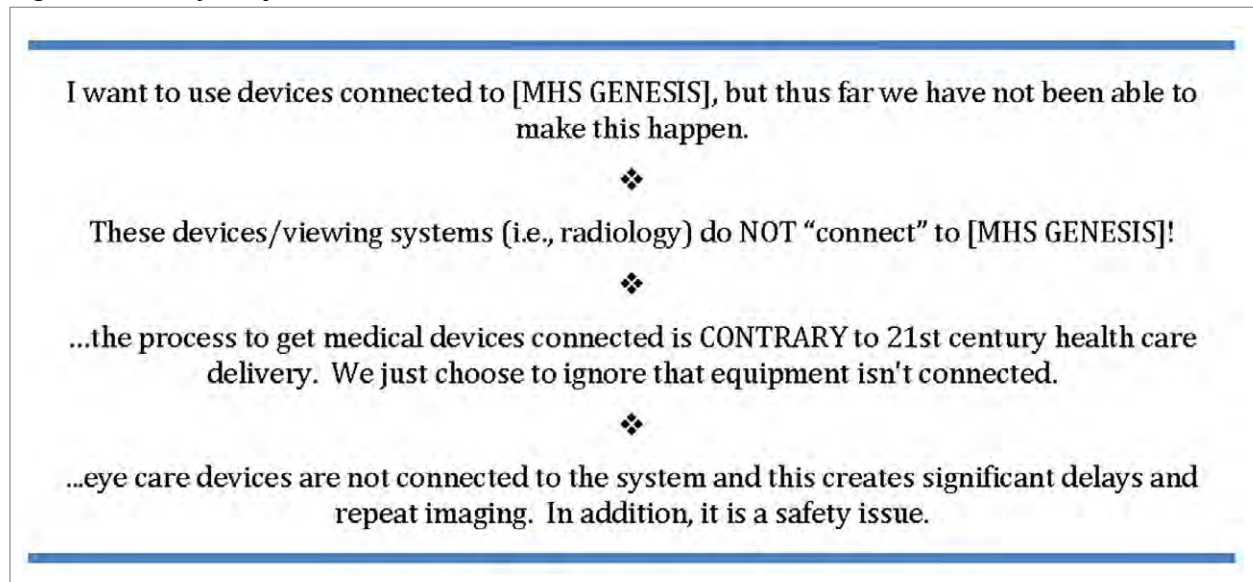
Source: The DoD OIG.

The DoD health care providers who responded that patient health care information was inaccurate or incomplete in MHS GENESIS indicated that they used external systems to obtain patient health care information. For example, of the 701 respondents, 371 (52.9 percent) used the JLV. However, DoD survey respondents indicated that patient health care information in the JLV was also inaccurate or incomplete. For example, respondents reported that the JLV was often down and when not down, it was cumbersome, slow, and often missing data.

Accuracy and Completeness of Medical Device Information

DoD health care provider indicated that patient health care information transferred from medical devices to MHS GENESIS was not always accurate or complete. Of the 701 DoD survey respondents, 145 (20.7 percent) reported that they used medical devices to provide care. Of those 145 respondents, 81 (55.9 percent) reported that medical devices transferred inaccurate or incomplete information to MHS GENESIS. In addition, the respondents reported that not all medical devices interacted with MHS GENESIS, which impacted the availability of patient information. Respondent comments related to the medical devices are illustrated in Figure 2.

Figure 2. Survey Respondent Comments Related to Medical Devices



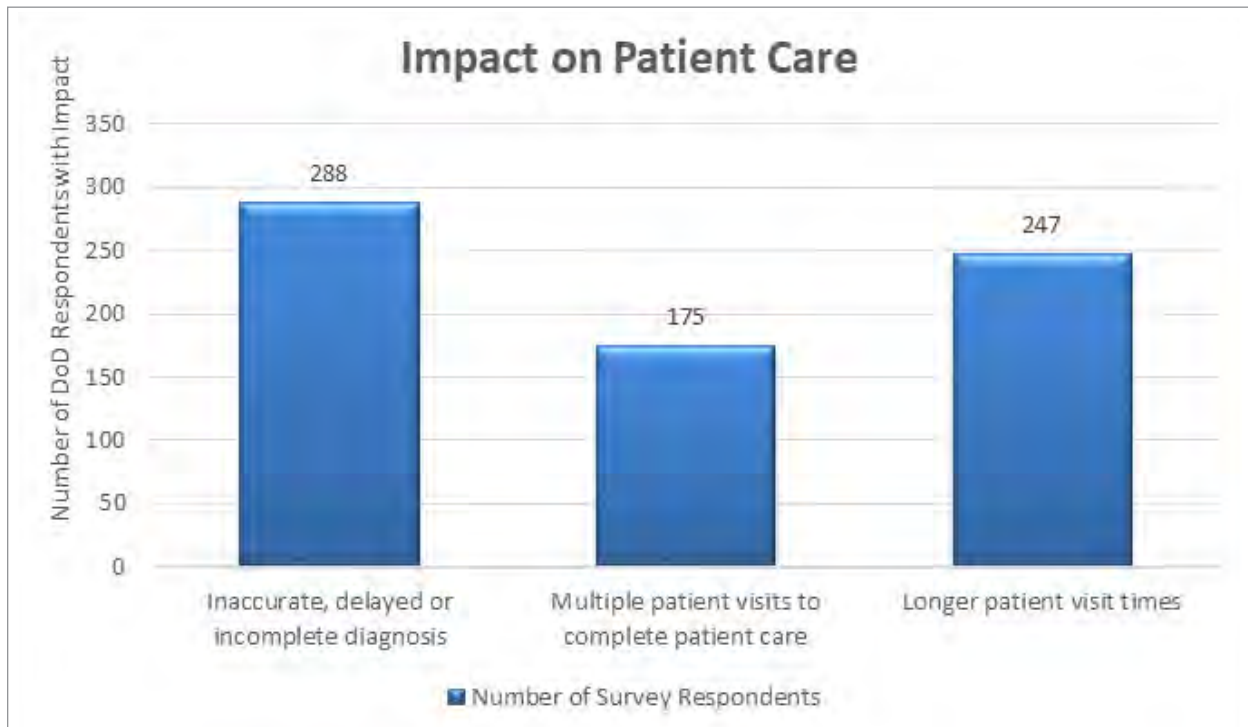
Source: The DoD OIG.

While the DHA Chief Health Informatics Officer was aware of the slow transmission of information from medical devices to MHS GENESIS, he stated that he was not aware that health care providers were experiencing problems with medical devices transferring inaccurate or incomplete information to MHS GENESIS.

Impact on Patient Care

The DoD survey respondents were also asked to identify how the inaccurate or incomplete patient health care information impacted their ability to provide quality patient care. Of the 701 DoD survey respondents, 43 (6.1 percent) reported no impact to their ability to provide quality patient care; however, the remaining 658 (93.9 percent) indicated an impact on patient care, as illustrated in Figure 3.

Figure 3. Types of Patient Health Care Information Reported as Inaccurate or Incomplete



Source: The DoD OIG.

Although we did not validate the survey results, the relevance of the health care providers' concerns to patient care is clear. Therefore, the DHA should further assess the concerns, determine whether they continue to exist, and take corrective action as necessary. According to the DHA, the MHS is critical to providing high-quality health care for Service members and veterans, which is one of the Nation's top priorities. MHS GENESIS was designed to improve access to health care information not only across the DoD, but also with the VA and external health care providers. Without the timely receipt of accurate and complete health care information, health care providers may be delayed in providing their patients an accurate and complete diagnosis and proper treatment. The DHA, in coordination with DoD health care providers, should assess the functionality of MHS GENESIS to determine whether the concerns identified by the survey respondents still exist. If the concerns still exist, then the DHA should develop and implement plans of action to address the concerns.

Recommendation, Management Comments, and Our Response

Recommendation

We recommend that the Director of the Defense Health Agency, in coordination with DoD health care providers, assess the functionality of Military Health System GENESIS to determine whether the concerns identified by the survey respondents still exist, and if the concerns still exist, develop and implement plans of action to address the concerns.

Defense Health Agency Director Comments

The DHA Director neither agreed nor disagreed with the recommendation but stated that the findings from the survey were an important tool to DHA personnel working to improve the functionality of MHS GENESIS. The Director stated that the DHA's Health Informatics team and partners in the Program Executive Office for Defense Healthcare Management Systems have started working with MHS GENESIS users to assess the concerns identified from the survey. In addition, the Director stated that the DHA Health Informatics team would develop strategies to address any concerns that the DHA identifies from its work with MHS GENESIS users.

The DHA Director further stated that the DHA Health Informatics team implemented 13 new capabilities and 2 major system upgrades, and made 1,393 system changes to resolve 3,500 user-submitted trouble tickets. The Director stated that the DHA was committed to ensuring MHS GENESIS meets the needs of patients, health care providers, and administrative staff.

Our Response

Comments from the DHA Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but open. We will close the recommendation once the Director provides documentation, such as a report, that shows the results of the assessment with MHS GENESIS users and the strategies developed to address the user concerns.

Appendix

Survey Administered to DoD Health Care Providers

We invited 7,378 DoD health care providers to take the survey. We developed the survey based on preliminary interviews with health care providers on the functionality of MHS GENESIS and issued the survey on October 22, 2020, to health care providers at eight DoD MTFs. The survey was not designed for statistical estimation but to collect information about users' experience with the MHS GENESIS system from a cross-service section of DoD MTFs. We coordinated the survey with the Washington Headquarters Services, the Defense Human Resources Activity, and the DoD Office of People Analytics. To maximize survey responses from DoD MTFs, we reached out to the MTFs that used MHS GENESIS approximately 2 weeks before the survey began to explain the importance of the survey and asked the MTFs to notify the health care providers of the survey to encourage participation.

Each invitation included a link to the survey containing a unique token that prevented health care providers from completing the survey more than once. We sent a reminder e-mail each week for the next 3 weeks to health care providers who had not yet completed the survey. The survey closed on November 9, 2020. We received 701 survey responses from DoD health care providers, for a response rate of 9.5 percent.

Limitations of Survey Responses and Bias of Survey Results

We considered the potential bias associated with survey respondents' responses (response bias) and those individuals who did not respond to the survey or to a question in the survey (non-response bias). Specifically, health care providers in a survey could differ in a statistically meaningful way based on an existing predisposition. For example, response bias in our survey most likely presents as extreme or misled answers from survey respondents. We compared the survey responses by location and by user role of the respondent and did not identify any anomalies or varied responses. We identified that 73 of the 701 DoD survey respondents submitted the survey before the VA deployed the new EHR system at the Mann-Grandstaff VA Medical Center in Spokane, Washington, and the responses concerning access to VA records in Section III of the survey may be inaccurate for those 73 survey respondents. However, survey responses across all locations and by all user roles were consistent for the questions in Section III; therefore, we could not detect a specific impact of those responses. As a result, while response bias may still exist, we could not detect the size or possible impact to the survey responses.

In addition, the survey included questions that may have confused the survey responders based on the responder's interpretation of "inaccurate and incomplete" information. For example, some responders may have experienced inaccurate but not incomplete information, but responded positively to state that the information was both inaccurate and incomplete. As a result, bias may exist in the survey responses.

Conversely, non-response bias in our survey most likely exists because health care providers who have not experienced significant problems with using MHS GENESIS are less likely to respond to the survey. As a result, it is more likely that we heard from respondents who had significant problems with using MHS GENESIS. Consequently, the survey results are likely to be biased toward those who have problems. We do not have demographic data for the non-respondents. In addition, we did not have externally verifiable data to compare the non-respondents to the respondents of the survey, and we are unable to perform the survey multiple times. As a result, we are not able to calculate how prevalent non response bias is in the survey data.

Management Comments

Defense Health Agency Director



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April 6, 2022

MEMORANDUM FOR: INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE

SUBJECT: Management Advisory on DoD Health Care Provider Concerns Regarding the Access to Complete and Accurate Electronic Health Records (Project No. D2020-D000CR-0092.001)

Thank you for the opportunity to respond to your recent Management Advisory following the Department of Defense and Department of Veterans Affairs joint audit on our continued efforts to achieve electronic health record interoperability.

The findings from the survey you administered as part of your audit are an important tool to our teams who are working to improve the functionality of our new electronic health record system, MHS GENESIS.

Per the recommendation in your Management Advisory, our teams within the Defense Health Agency (DHA) Health Informatics and our partners from the Program Executive Office for Defense Healthcare Management Systems, have already begun working with MHS GENESIS end users to assess the functionality of the system and determine whether the concerns highlighted in your survey still exist, and for those that do they are developing strategies to address them.

In fact, throughout calendar year 2021, our Health Informatics team oversaw the implementation of 13 new capabilities and two major commercial system upgrades designed to improve the usability of MHS GENESIS. The team also resolved over 3,500 trouble tickets submitted by MHS GENESIS end users resulting in 1,393 user directed system changes.

Please be assured the DHA is committed to ensuring MHS GENESIS meets the needs of our patients, health care providers and administrative staff. Moreover, our teams will continue to address all concerns related to MHS GENESIS as they are brought to our attention, and strive to achieve an interoperable electronic health record for our Nation's Service members, veterans and their families.

PLACE RONALD J.
OSEPH

RONALD J. PLACE
LTG, MC, USA
Director



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