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Testimony

Before the Subcommittee on Oversight and Investigations, Committee on Veterans' Affairs, House of Representatives

COMPUTER-BASED PATIENT RECORDS

Improved Planning and Project Management Are Critical to Achieving Two-Way VA–DOD Health Data Exchange

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COMPUTER-BASED PATIENT RECORDS

Improved Planning and Project Management Are Critical to Achieving Two-Way VA-DOD Health Data Exchange

Why GAO Did This Study

Providing readily accessible health information on veterans and active duty military personnel is highly essential to ensuring that these individuals are given quality health care and assistance in adjudicating disability claims. Moreover, ready access to health information is consistent with the President's recently announced intention to provide electronic health records for most Americans within 10 years. In an attempt to improve the sharing of health information, the Departments of Veterans Affairs (VA) and Defense (DOD) have been working, since 1998, toward the ability to exchange electronic health records for use by veterans, military personnel, and their health care providers.

In testimony before the Subcommittee last November and again this past March, GAO discussed the progress being made by the departments in this endeavor. While a measure of success has been achieved—the one-way transfer of health data from DOD to VA health care facilities—identifying the technical solution for a two-way exchange, as part of a longer term Health*e*People (Federal) initiative, has proven elusive.

At the Subcommittee's request, GAO reported on its continuing review of the departments' progress toward this goal of an electronic two-way exchange of patient health records.

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To view the full product, including the scope and methodology, click on the link above. For more information, contact Linda Koontz at (202) 512-6240 or koontzl@gao.gov.

What GAO Found

VA and DOD are continuing with activities to support the sharing of health data; nonetheless, achieving the two-way electronic exchange of patient health information, as envisioned in the Health*e*People (Federal) strategy, remains far from being realized. Each department is proceeding with the development of its own health information system—VA's Health*e*Vet VistA and DOD's Composite Health Care System (CHCS) II; these are critical components for the eventual electronic data exchange capability. The departments are also proceeding with the essential task of defining data and message standards that are important for exchanging health information between their disparate systems. In addition, a pharmacy data prototype initiative begun this past March, which the departments stated is an initial step to defining the technology for the two-way data exchange, is ongoing. However, VA and DOD have not yet defined an architecture to guide the development of the electronic data exchange capability, and lack a strategy to explain how the pharmacy prototype will contribute toward determining the technical solution for achieving Health*e*People (Federal). As such, there continues to be no clear vision of how this capability will be achieved, and in what time period.

Compounding the challenge faced by the departments is that they continue to lack a fully established project management structure for the Health*e*People (Federal) initiative. As a result, the relationships between the departments' managers is not clearly defined, a lead entity with final decision-making authority has not been designated, and a coordinated, comprehensive project plan that articulates the joint initiative's resource requirements, time frames, and respective roles and responsibilities of each department has not yet been established. In discussing the need for these components, VA and DOD program officials stated this week that the departments had begun actions to develop a project plan and define the management structure for Health*e*People (Federal). In the absence of such components, the progress that VA and DOD have achieved is at risk of compromise, as is assurance that the ultimate goal of a common, exchangeable two-way health record will be reached.

Given the importance of readily accessible health data for improving the quality of health care and disability claims processing for military members and veterans, we currently have a draft report at the departments for comment, in which we are making recommendations to the Secretaries of Veterans Affairs and Defense for addressing the challenges to, and improving the likelihood of successfully achieving the electronic two-way exchange of patient health information.

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Mr. Chairman and Members of the Subcommittee:

I am pleased to participate in today's continuing discussion of electronic health records and the Department of Veterans Affairs' (VA) and Department of Defense's (DOD) actions toward developing the capability to electronically exchange patient health information. In the face of terrorism, related military responses, and a general call for improved health care delivery, providing readily accessible medical data on active duty military personnel and veterans is more essential than ever to ensuring that these individuals receive high-quality health care and assistance in adjudicating any disability claims that they may have. The President's recently announced proclamation to provide electronic health records for most Americans within the next 10 years further highlights the significance and potential contributions of the departments' actions in pointing the way toward the delivery of more effective health care services.

For the past 6 years, VA and DOD have been working to achieve an electronic medical record and patient health information-sharing capability, beginning with a joint project in 1998 to develop a government computer-based patient record. As we noted in previous testimony,[1] the departments have achieved a measure of success in sharing data through the one-way transfer of health information from DOD to VA health care facilities. However, they have been severely challenged in their pursuit of a longer term objective—providing a virtual medical record based on the two-way exchange of patient health care information, as part of their Health*e*People (Federal) initiative. This past March, we reported that VA and DOD had made little progress in identifying a technological solution for achieving a two-way exchange of patient health data and lacked discipline in their approach to managing this initiative.

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[1]U.S. General Accounting Office, *Computer-Based Patient Records: Sound Planning and Project Management Are Needed to Achieve a Two-Way Exchange of VA and DOD Health Data,* GAO-04-402T (Washington, D.C.: March 17, 2004) and *Computer-Based Patient Records: Short-Term Progress Made, but Much Work Remains to Achieve a Two-Way Data Exchange Between VA and DOD Health Systems,* GAO-04-271T (Washington, D.C.: November 19, 2003).

At your request, my testimony today will discuss our continuing assessment of VA's and DOD's progress in realizing the Health_e_People (Federal) goal of an electronic patient health record and two-way data exchange capability. In conducting this work, we reviewed the departments' documentation describing VA's and DOD's actions to develop new health information systems and determine a strategy for developing a secure, electronic two-way data exchange capability, including project schedules, project status reports, and conversion and deployment plans. We also reviewed documentation identifying the costs that the departments have incurred in developing technology to support the sharing of health data, including costs associated with achieving the one-way transfer of data from DOD to VA health care facilities, and ongoing projects to develop new health information systems. We did not audit the reported costs, and thus cannot attest to their accuracy or completeness. We supplemented our analyses of the agencies' documentation with interviews of VA and DOD officials responsible for key decisions and actions on the health data-sharing initiatives. We conducted our work in accordance with generally accepted government auditing standards, during May of this year.

Results In Brief

VA and DOD are proceeding with actions intended to support the sharing of health data, but continue to be far from achieving the two-way electronic data exchange capability envisioned in the Health_e_People (Federal) strategy. The departments are continuing to take actions to develop their individual health information systems that are critical to exchanging patient health information and to define data standards that are essential to the common sharing of health information. In addition, department officials stated that they are proceeding with a pharmacy data prototype initiative, begun in March, to satisfy a mandate of the Bob Stump National Defense Authorization Act for Fiscal Year 2003,[2] as an

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[2]P.L. 107-314, sec. 724 (2002).

initial step toward achieving Health*e*People (Federal). At this stage, however, they have not developed a strategy to explain how this project will contribute to defining the technological solution for the data exchange capability. As such, VA and DOD continue to lack a clearly defined architecture and technological solution for developing the electronic interface and associated capability for exchanging patient health information between their new systems. Moreover, the departments remain challenged to articulate a clear vision of how this capability will be achieved, and in what time frame.

Further compounding the challenge and uncertainty that VA and DOD face is that they continue to lack a fully established project management structure for this undertaking. The relationships among management entities involved with the Health*e*People (Federal) initiative have not been clearly established and the departments have not designated a lead entity with final decision-making authority for the initiative to ensure that decision making and oversight will not be blurred across management entities. In addition, while the departments have designated a manager for the pharmacy data prototype project that they view as an initial step toward defining electronic data exchange technology, they do not yet have a comprehensive and coordinated project plan for the Health*e*People (Federal) initiative to articulate the time frames, resource requirements, and roles and responsibilities of VA and DOD officials charged with designing, developing, and implementing the electronic interface capability. The departments also have not instituted project review milestones and measures that provide a basis for comprehensive management, progressive decision making, and authorization of funding for each step in the development process. In discussing their management of Health*e*People (Federal), VA and DOD program officials stated this week that the departments had begun developing a project plan and defining the management structure for this initiative.

Absent a comprehensive and coordinated approach to implementing and conveying information about Health*e*People (Federal), VA and DOD risk compromising their progress and lack assurance that the goals of this initiative will be successfully realized. Given the importance of readily accessible health data for improving the

quality of health care and disability claims processing for military members and veterans, we currently have a draft report at the departments for comment, in which we are making recommendations to the Secretaries of Veterans Affairs and Defense for addressing the challenges to and improving the likelihood of successfully achieving the electronic two-way exchange of patient health information.

Background

In 1998, following a Presidential call for VA and DOD to start developing a "comprehensive, life-long medical record for each service member," the two departments began a joint course of action toward achieving the capability to share patient health information for active duty military personnel and veterans.[3] As their first initiative, undertaken in that year, the Government Computer-Based Patient Record (GCPR) project was envisioned as an electronic interface that would allow physicians and other authorized users at VA and DOD health facilities to access data from any of the other agencies' health information systems. The interface was expected to compile requested patient information in a virtual record that could be displayed on a user's computer screen.

Our prior reviews of the GCPR project determined that the lack of a lead entity, clear mission, and detailed planning to achieve that mission made it difficult to monitor progress, identify project risks, and develop appropriate contingency plans. Accordingly, reporting on this project in April 2001 and again in June 2002,[4] we made several recommendations to help strengthen the management and

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[3]Initially, the Indian Health Service (IHS) also was a party to this effort, having been included because of its population-based research expertise and its long-standing relationship with VA. However, IHS was not included in a later revised strategy for electronically sharing patient health information.

[4]U.S. General Accounting Office, *Veterans Affairs: Sustained Management Attention Is Key to Achieving Information Technology Results,* GAO-02-703 (Washington, D.C.: June 12, 2002) and *Computer-Based Patient Records: Better Planning and Oversight By VA, DOD, and IHS Would Enhance Health Data Sharing,* GAO-01-459 (Washington, D.C.: April 30, 2001).

oversight of GCPR. Specifically, in 2001 we recommended that the participating agencies (1) designate a lead entity with final decision-making authority and establish a clear line of authority for the GCPR project, and (2) create comprehensive and coordinated plans that included an agreed-upon mission and clear goals, objectives, and performance measures, to ensure that the agencies could share comprehensive, meaningful, accurate, and secure patient health care data. In 2002 we recommended that the participating agencies revise the original goals and objectives of the project to align with their current strategy, commit the executive support necessary to adequately manage the project, and ensure that it followed sound project management principles. VA and DOD took specific measures in response to our recommendations for enhancing overall management and accountability of the project.

By July 2002, VA and DOD had revised their strategy and had made progress toward electronically sharing patient health data. The two departments had renamed the project the Federal Health Information Exchange (FHIE) program and, consistent with our prior recommendation, had finalized a memorandum of agreement designating VA as the lead entity for implementing the program. This agreement also established FHIE as a joint activity that would allow the exchange of health care information in two phases. The first phase, completed in mid-July 2002, enabled the one-way transfer of data from DOD's existing health information system (the Composite Health Care System) to a separate database that VA clinicians could access. A second phase, finalized this past March, completed VA's and DOD's efforts to add to the base of patient health information available to VA clinicians via this one-way sharing capability. According to program officials, FHIE is now fully operational and is showing positive results by providing a wide range of health care information to enable clinicians to make more informed decisions regarding the care of veterans and to facilitate processing disability claims. The officials stated that the departments have now begun leveraging the FHIE infrastructure to achieve interim exchanges of health information on a limited basis, using existing health systems

at joint VA/DOD facilities.[5] The departments reported total GCPR/FHIE costs of about $85 million through fiscal year 2003.

The revised strategy also envisioned achieving a longer term, two-way exchange of health information between DOD and VA. Known as Health*e*People (Federal), this initiative is premised upon the departments' development of a common health information architecture comprising standardized data, communications, security, and high-performance health information systems. The joint effort is expected to result in the secured sharing of health data required by VA's and DOD's health care providers between systems that each department is currently developing—DOD's Composite Health Care System (CHCS) II and VA's Health*e*Vet VistA.

DOD began developing CHCS II in 1997 and has completed its associated clinical data repository—a key component for the planned electronic interface. The department expects to complete deployment of all of its major system capabilities by September 2008.[6] It reported expenditures of about $464 million for the system through fiscal year 2003. VA began work on Health*e*Vet VistA and its associated health data repository in 2001, and expects to complete all six initiatives comprising this system in 2012.[7] VA reported spending about $120 million on Health*e*Vet VistA through fiscal year 2003.

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[5]VA and DOD officials stated that these efforts were not expected to contribute to determining the technological solution for a two-way data exchange between VA's and DOD's new health information systems but, instead, constituted attempts toward facilitating the sharing of health data in the absence of the longer term capabilities that Health*e*People (Federal) is expected to provide.

[6]DOD's CHCS II capabilities are being deployed in blocks. Block 1 provides a graphical user interface for clinical outpatient processes; block 2 supports general dentistry; block 3 provides pharmacy, laboratory, radiology, and immunizations capabilities; block 4 provides inpatient and scheduling capabilities; and block 5 will provide additional capabilities as defined.

[7]The six initiatives that make up Health*e*Vet VistA are health data repository, billing replacement, laboratory, pharmacy, imaging, and appointment scheduling replacement.

Under the Health_e_People (Federal) initiative, VA and DOD envision that, upon entering military service, a health record for the service member will be created and stored in DOD's CHCS II clinical data repository. The record will be updated as the service member receives medical care. When the individual separates from active duty and, if eligible, seeks medical care at a VA facility, VA will then create a medical record for the individual, which will be stored in its health data repository. Upon viewing the medical record, the VA clinician would be alerted and provided with access to the individual's clinical information residing in DOD's repository. In the same manner, when a veteran seeks medical care at a military treatment facility, the attending DOD clinician would be alerted and provided with access to the health information in VA's repository. According to the departments, this planned approach would make virtual medical records displaying all available patient health information from the two repositories accessible to both departments' clinicians. VA officials anticipated being able to exchange some degree of health information through an interface of their health data repository with DOD's clinical data repository by the end of 2005.

Progress Toward Achieving Health_e_People (Federal) Faces Continued Challenges and Risks

As we have noted,[8] achieving the longer term capability to exchange health data in a secure, two-way electronic format between new health information systems that VA and DOD are developing is a challenging and complex undertaking, in which success depends on having a clearly articulated architecture, or blueprint, defining how specific technologies will be used to deliver the capability. Developing, maintaining, and using an architecture is a best practice in engineering information systems and other technological

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[8]GAO-04-402T.

solutions, articulating, for example, the systems and interface requirements, design specifications, and database descriptions for the manner in which the departments will electronically store, update, and transmit their data.

Successfully carrying out the initiative also depends on the departments' instituting a highly disciplined approach to the project's management. Industry best practices and information technology project management principles stress the importance of accountability and sound planning for any project, particularly an interagency effort of the magnitude and complexity of this one. Such planning involves developing and using a project management plan that describes, among other factors, the project's scope, implementation strategy, lines of responsibility, resources, and estimated schedules for development and implementation.

Currently, VA and DOD are proceeding with the development of their new health information systems and with the identification of standards that are essential to sharing common health data. DOD is deploying its first release of CHCS II functionality (a capability for integrating DOD clinical outpatient processes into a single patient record), with scheduled completion in June 2006. For its part, VA continues to work toward completing a prototype for the department's health data repository, scheduled for completion at the end of next month. In addition, as we reported in March, the departments have continued essential steps toward standardizing clinical data, having adopted data and message standards that are important for exchanging health information between disparate systems.[9] Department officials also stated that they were proceeding with a pharmacy data prototype initiative, begun in March to satisfy a mandate of the Bob Stump National Defense Authorization Act for

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[9]VA and DOD, along with the Department of Health and Human Services, have been active participants in the Consolidated Health Informatics initiative. As part of this initiative, the Secretary of Health and Human Services announced in early May the adoption of 15 new standards to enable the exchange of health information.

Fiscal Year 2003, [10] as an initial step toward achieving Health*e*People (Federal). The officials maintain that they expect to be positioned to begin exchanging patient health information between their new systems on a limited basis in the fall of 2005, identifying four categories of data that they expect to be able to exchange: outpatient pharmacy data, laboratory results, allergies, and patient demographics.

However, VA's and DOD's approach to meeting this Health*e*People (Federal) goal is fraught with uncertainty and lacks a solid foundation for ensuring that this mission can be successfully accomplished. As we reported in March, the departments continue to lack an architecture detailing how they intend to use technology to achieve the two-way electronic data exchange capability. In discussing their intentions for developing such an architecture, VA's Deputy Chief Information Officer for Health stated last week that the departments do not expect to have an established architecture until a future unspecified date. He added that VA and DOD planned to take an incremental approach to determining the architecture and technological solution for the data exchange capability. He explained, for example, that they hope to gain from the pharmacy data prototype project an understanding of what technology is necessary and how it should be deployed to enable the two-way exchange of patient health records between their data repositories. VA and DOD reported approval of the contractor's technical requirements for the prototype last month and have a draft architecture for the prototype. They expect to complete the prototype in mid-September of this year.

Although department officials consider the pharmacy data prototype to be an initial step toward achieving Health*e*People (Federal), how

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[10]Sec. 724 of the act mandates that the Secretaries of Veterans Affairs and Defense seek to ensure that, on or before October 1, 2004, the two departments' pharmacy data systems are interoperable for VA and DOD beneficiaries by achieving real-time interface, data exchange, and checking of prescription drug data of outpatients and using national standards for the exchange of outpatient medication information. The act further states that if the specified interoperability is not achieved by that date, then the Secretary of Veterans Affairs shall adopt DOD's Pharmacy Data Transaction System for VA's use.

and to what extent the prototype will contribute to defining the electronic interface for a two-way data exchange between VA's and DOD's new health information systems are unclear. Such prototypes, if accomplished successfully, can offer valuable contributions to the process of determining the technological solution for larger, more encompassing initiatives. However, ensuring the effective application of lessons learned from the prototype requires that VA and DOD have a well-defined strategy to show how this project will be integrated with the Health_ePeople (Federal) initiative. Yet VA and DOD have not developed a strategy to articulate the integration approach, time frames, and resource requirements associated with implementing the prototype results to define the technological features of the two-way data exchange capability under Health_ePeople (Federal). Until VA and DOD are able to determine the architecture and technological solution for achieving a secure electronic systems interface, they will lack assurance that the capability to begin electronically exchanging patient health information between their new systems in 2005 can be successfully accomplished.

In addition to lacking an explicit architecture and technological solution to guide the development of the electronic data exchange capability, VA and DOD continue to be challenged in ensuring that this undertaking will be managed in a sound, disciplined manner. As was the situation in March, VA and DOD continue to lack a fully established project management structure for the Health_ePeople (Federal) initiative. The relationships among the management entities involved with the initiative have not been clearly established, and no one entity has authority to make final project decisions binding on the other. As we noted during the March hearing, the departments' implementation of our recommendation that it establish a lead entity for the Government Computer-Based Patient Record project helped strengthen the overall accountability and management of that project and contributed to its successful accomplishment.

Further, although the departments have designated a project manager and established a project plan defining the work tasks and management structure for the pharmacy prototype, they continue to lack a comprehensive and coordinated project plan for

Health_e_People (Federal), to explain the technical and managerial processes that have been instituted to satisfy project requirements for this broader initiative. Such a plan would include, among other information, details on the authority and responsibility of each organizational unit; the work breakdown structure and schedule for all of the tasks to be performed in developing, testing, and deploying the electronic interface; as well as a security plan. The departments also have not instituted necessary project review milestones and measures to provide a basis for comprehensive management of the project at critical intervals, progressive decision making, or authorization of funding for each step in the development process. As a result, current plans for the development of the electronic data exchange capability between VA's and DOD's new health information systems do not offer a clear vision for the project or demonstrate sufficient attention to the effective day-to-day guidance of and accountability for the investments in and implementation of this capability. In discussing their management of Health_e_People (Federal), VA and DOD program officials stated this week that the departments had begun actions to develop a project plan and define the management structure for this initiative.

Given the significance of readily accessible health data for improving the quality of health care and disability claims processing for military members and veterans, we currently have a draft report at the departments for comment, in which we are recommending to the Secretaries of Veterans Affairs and Defense, a number of actions for addressing the challenges to, and improving the likelihood of, successfully achieving the electronic two-way exchange of patient health information.

In summary, VA's and DOD's pursuit of various initiatives to achieve the electronic sharing of patient health data represents an important step toward providing more high-quality health care for active duty military personnel and veterans. Moreover, in undertaking Health_e_People (Federal), the departments have an opportunity to help lead the nation to a new frontier of health care delivery. However, the continued absence of an architecture and defined technological solution for an electronic interface for their new health information systems, coupled with the need for more comprehensive and coordinated management of the projects

supporting the development of this capability, elevates the uncertainty about how VA and DOD intend to achieve this capability and in what time frame. Until these critical components have been put into place, the departments will continue to lack a convincing position regarding their approach to and progress toward achieving the Health*e*People (Federal) goals and, ultimately, risk jeopardizing the initiative's overall success.

Mr. Chairman, this concludes my statement. I would be pleased to respond to any questions that you or other members of the Subcommittee may have at this time.

Contacts and Acknowledgments

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