THE ASSISTANT SECRETARY OF DEFENSE

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WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

JUL 05 2006

The Honorable John W. Warner
Chairman, Committee on Armed Services
United States Senate
Washington, DC 20510-6050

Dear Mr. Chairman:

I am pleased to forward the enclosed report required by Section 735 of the National Defense Authorization Act for Fiscal Year 2006. This report provides a chronology and description of previous efforts undertaken to develop an electronic medical records system capable of maintaining a two-way exchange of data between the Department of Defense and the Department of Veterans Affairs.

The report also describes, as of the date of the report, plans for the implementation of the AHLTA global electronic health record system, the software and hardware being considered, the management structure and accountability measures used in its development in order to evaluate progress made in the development of that system, and the schedule for its remaining development.

Thank you for your continued support for the Military Health System.

Sincerely,

Stephen L. Jones
for William Winkenwerder, Jr., MD

Enclosure:
As stated

cc:
Senator Carl Levin

Report to Congress

Report on the Department of Defense AHLTA

Global Electronic Health Record System

Required by:

Section 735, National Defense Authorization Act for Fiscal Year 2006

REPORT ON DEPARTMENT OF DEFENSE AHLTA GLOBAL ELECTRONIC HEALTH RECORD SYSTEM

Background

This report is required by Section 735 of the National Defense Authorization Act for Fiscal Year (FY) 2006. The report includes a discussion of the following:

1. A chronology and description of previous efforts undertaken to develop an electronic medical records system capable of maintaining a two-way exchange of data between the Department of Defense (DoD) and the Department of Veterans Affairs (VA).

2. The plans as of the date of the report, including any projected commencement dates, for the implementation of the AHLTA global electronic health record system.

3. A description of the software and hardware being considered as of the date of the report for use in the AHLTA global electronic health record system.

4. A description of the management structure used in the development of the AHLTA global electronic health record system.

5. A description of the accountability measures utilized during the development of the AHLTA global electronic health record system in order to evaluate progress made in the development of that system.

6. The schedule for the remaining development of the AHLTA global electronic health record system.

AHLTA Description

AHLTA is the military's Electronic Health Record (EHR), an enterprise-wide medical and dental clinical information system. It generates, stores, and provides secure online access to comprehensive patient records for more than 9.2 million Military Health System beneficiaries. AHLTA ensures the continuity of the Department's health information and patient-centered healthcare delivery – with one patient, one record and worldwide accessibility. Patient data entered in AHLTA is available around the clock and around the globe to authorized providers regardless of where the beneficiary seeks care.

AHLTA is a scalable, easy to use, secure system that was designed for use in harsh field environments, on board ships, and in fixed medical facilities. Tested and in use today, it is versatile enough to be used by emergency medical technicians, physicians and the continuum of

healthcare providers. By partnering with America's leading information technology companies, AHLTA supports best medical practices in use today and has a common medical dictionary of terms, easily understood by all users from first responders to medical specialists.

AHLTA provides the capability to document present care, exposure to different environmental or occupational hazards, and retrieve the care record, including dental care and immunizations. It is an invaluable force health protection tool that increases military medicine's ability to provide comprehensive health surveillance. AHLTA enables the access to timely health information that is then available for use in monitoring and responding to population disease outbreaks, natural and man-made. AHLTA's central store of structured data, available when needed, supports sophisticated data mining and analysis, bio-medical surveillance and population health management activities. With the ability to rapidly detect health events and, in turn, allow earlier intervention by healthcare professionals and emergency response teams, lives can be saved.

Previous Electronic Medical Record System Development Efforts

Our President has set as a national priority an electronic health record for all citizens. Both the DoD and VA lead the nation in their application of information technology in healthcare. Achieving interoperability between the two Departments' electronic health records is not only an imperative for veterans' healthcare but also important to the nation's citizens. The lessons learned by the two Departments will provide invaluable input for the development and implementation of the nation's healthcare information infrastructure. By sharing timely, complete, accurate, and secure health care information between the two Departments, we are setting the national benchmark for health information technology excellence.

For more than a decade, DoD has been using one of the world's first and largest computerized physician order entry systems, Composite Health Care System (CHCS). CHCS, DoD's first generation EHR and introduced in 1988, is a system used in all DoD military medical treatment facilities worldwide. It has provided computerized physician order entry for greater than 15 years, a capability only now becoming common in the private sector. This quantum leap from paper to electronic order entry has permitted DoD health care providers to electronically order laboratory tests, retrieve test results, authorize radiology procedures, prescribe medications, and schedule appointments. Today, CHCS electronically documents 50 million outpatient appointments and performs 70 million prescription transactions annually.

CHCS serves as the backbone for the very successful Pharmacy Data Transaction Service (PDTS), a commercial offering. PDTS maintains a patient medication record for all DoD beneficiaries worldwide. PDTS automates the review of each beneficiary's new prescription against all previous prescriptions filled through any point of service in the Military Health System, including military treatment facilities, retail network pharmacies and the TRICARE Mail Order Pharmacy. A cutting-edge benefit for beneficiaries and providers alike, PDTS has improved the quality of prescription services and enhanced patient safety by reducing the likelihood of adverse drug to drug interactions and duplicate treatments. Each prescription undergoes clinical screening against the patient's complete medication history before it is dispensed to the beneficiary. Use of the PDTS has resulted in higher quality medical care based

on proper medication control, reduction of fraud and abuse, better management reporting and control, and most importantly, increased patient safety.

CHCS, a hospital-wide integrated information system, primarily supports ambulatory and outpatient care. As a "hospital or facility-centric" information system, all healthcare personnel in that particular facility use the system. The CHCS data is stored locally and available to those at the local facility. To gain user acceptance, CHCS was designed to accommodate local or regional business rules and vocabulary. This flexibility limits the transportability and understandability of the data to other CHCS locations. When answers are needed to an inquiry across the enterprise, queries are made to each of the CHCS locations, vice one query to one system; this is a time and resource intensive activity to query, normalize, and aggregate data across enterprise facilities. Additionally, when patients moved to another region or location, the electronic records did not transfer across the CHCS locations, because of the uniqueness of the data and terminology in each system.

Shortly after the Persian Gulf War, which highlighted the shortcomings of existing paper records and electronic records, DoD began investigating the merits and feasibility of evolving the CHCS capabilities and technology to an electronic health record, with a centralized repository of all healthcare information. The DoD's direction in the mid-1990s to use commercial-off-the shelf (COTS) software, coupled with advances and maturity in the technology industry, greatly influenced the DoD's direction and drive towards the military EHR. The CHCS II Program was established in January 1997 to implement a worldwide, single, integrated clinical information system to enhance quality health care services in the 21st century. Today's military EHR, AHLTA, evolved from the CHCS II Program; AHLTA was officially announced in November 2005 and the use of the CHCS II name discontinued.

AHLTA, with a common health dictionary and application of industry standards, alleviates the previous barriers to aggregating data and sharing information among DoD facilities. AHLTA uses new commercial technologies and new commercial or reengineered government applications. AHLTA applies industry communications, data, technology, and security standards to enhance the sharing of data within the DoD, as well as with other federal agencies and public and private sector organizations. Health data is stored in a beneficiary-centric format replacing the legacy DoD facility-centric system, CHCS. This standardized health information can be easily shared between facilities, making patients' electronic health records available *around the clock and around the globe,* when needed by those providing health care to our armed forces, their families, and our veterans.

The Department's data sharing strategies build upon incremental successes, incorporating lessons learned into the progressively more difficult information sharing initiatives. Early attempts in the late 1990s, such as the Government Computer-based Patient Record (GCPR), to share information from legacy systems were limited by technology products, inadequacies in the legacy systems data, and the lack of industry healthcare information standards. In initial information sharing initiatives, DoD provided aggregated viewable, vice computable, data on a monthly basis. With the improvements in technology, adoption of healthcare information technology standards, and more robust information systems, the DoD and the VA have two way data exchange of health information today. The information sharing capabilities will soon be

real time, single instance, and computable data. In addition to working together, by using common data, security, and communications standards, the Departments are realizing the benefits of interoperability. Both Departments are leading the effort to build the Federal Health Architecture (FHA). With the goal of improving health data sharing and maximizing the federal health information technology investment, the FHA will consistent of common communications, data, security, and technical standards.

The Departments continue to make enhancements through several information management and technology products to significantly improve the secure sharing of appropriate health information. These initiatives enhance healthcare delivery to beneficiaries and improve the continuity of care for those who have served our country. Six information sharing products in use today by DoD and VA are described below.

The Federal Health Information Exchange (FHIE) enables the transfer of protected electronic health information from DoD to VA at the time of a Service member's separation. DoD transmits to VA on a monthly basis: laboratory results, radiology results, outpatient pharmacy data, allergy information, discharge summaries, consult reports, admission, disposition and transfer information, elements of the standard ambulatory data records and demographic data on separated Service members. VA providers and benefits specialists access this data daily for use in the delivery of healthcare and claims adjudication. DoD has transmitted messages to the FHIE data repository on more than 3.29 million unique retired or discharged Service members. This number grows as health information on recently separated Service members is extracted and transferred to VA.

Pre- and Post-Deployment Health Assessments are used to monitor the overall health condition of deployed troops, inform them of potential health risks, as well as maintain and improve the health of Service members and veterans. DoD has extended the FHIE capabilities to incorporate pre- and post deployment health assessment information completed by Service members as they leave and return from duty outside the U.S. and by separated service members. DoD is now sending electronic pre- and post-deployment health assessment information to the VA. At the end of March 2006, more than 1.3 million pre- and post-deployment health assessments had been performed on over 560,000 separated Service members and demobilized Reserve and National Guard members. DoD plans to add post-deployment health reassessment information in late FY06 or early FY07.

The Laboratory Data Sharing Initiative (LDSI) facilitates the electronic sharing of laboratory order entry and results retrieval between DoD, VA and commercial reference laboratories. LDSI is available for use throughout DoD. It is actively being used daily between DoD and VA at several sites where one Department uses the other as a reference lab.

The Bidirectional Health Information Exchange (BHIE) enables real-time sharing of allergy, outpatient pharmacy, demographic, laboratory and radiology data between DoD BHIE sites and all VA Treatment Facilities for patients treated in both DoD and VA. As of May 2006, BHIE is operational at 13 DoD sites. Deployment to additional sites in FY06 is being coordinated with the Services, and local DoD and VA sites, with site selection based on support to returning members of Operation Enduring Freedom and Operation Iraqi Freedom, number of visits for VA

beneficiaries treated in DoD facilities, current FHIE usage, number and types of DoD medical treatment facilities, local sharing agreements, retiree population, and local site interest.

The Clinical Data Repository/Health Data Repository (CHDR) establishes interoperability between DoD's Clinical Data Repository and VA's Health Data Repository. DoD and VA are working on the ability to exchange outpatient pharmacy and medication allergy data on shared patients in the DoD Clinical Data Repository (CDR) and the VA Health Data Repository (HDR) in FY06. This data will be computable allowing the DoD and VA systems to perform drug interaction checking and drug allergy checking. The outpatient pharmacy data being exchanged utilizes DoD Pharmacy Data Transaction Service (PDTS), so that DoD pharmacy data includes military treatment facility pharmacy, DoD retail pharmacy network, and mail order pharmacy.

The Military Health System is developing and implementing a new approach to the longstanding stumbling block to medical informatics interoperability. The Terminology Services Bureau has demonstrated the extraordinary value of this dual-use project, which provides a public domain lexicon for use by the commercial medical informatics world as well as AHLTA. Key commercial vendors are now regularly placing their proprietary medical concepts and codes into a carefully integrated and publicly available environment through participation in the Terminology Service Bureau. The Military Health System is currently in discussion with the VA regarding the application of the Terminology Service Bureau in overcoming the barriers of medical terminology and proprietary nomenclatures.

Implementation Plans

The AHLTA implementation process is continually refined by the AHLTA Program Office in coordination with the Service Medical Departments to ensure implementation proceeds in a smooth, effective manner, maintaining user confidence in system performance.

An Acquisition Decision Memorandum (ADM) for CHCS II limited deployment was signed in January 2003, and another ADM authorizing full deployment was signed November 2003. DoD is currently in the process of fielding AHLTA worldwide.

As of May 05, 2006, AHLTA Block 1 has been implemented at 105 of 139 planned Military Treatment Facility (MTF) sites spanning 11 time zones worldwide, with 46,026 of 63,000 total users fully trained, to include 15,644 healthcare providers. AHLTA use continues to grow at a significant pace. As of May 05, 2006, AHLTA has processed 19,975,359 outpatient encounters. AHLTA is currently processing over 79,600 patient encounters per workday. AHLTA Block 1 functionality includes encounter documentation, order entry/results retrieval, encounter coding support, alerts and reminders, role-based security, health data dictionary, master patient index, and ad hoc query capability. Worldwide deployment is expected to be completed by the end of calendar year 2006. AHLTA Block 2 Release 1 functionality, which provides eyeglass management support, is scheduled to begin worldwide deployment in 2006. The Program Manager's current estimate for Block 2 Release 2 deployment is February 2007, with AHLTA achieving full operating capability projected for September 2011.

AHLTA Software and Hardware Description

AHLTA is scalable, intended for use at fixed medical facilities, on-board ships, and in deployed medical facilities on the battlefield. AHLTA is used today on handheld devices, laptops, and network computers. Information captured by first responders on the handheld devices is preserved until it can be transmitted in case of poor communications or in austere conditions with no communications capabilities.

AHLTA leverages commercial-off-the-shelf (COTS) products based on industry best practices and structured documentation for sophisticated data mining. Competition drives best of breed and best of products. The structured documentation supports coding, billing and analysis that enhances population health management and symptom-based medical surveillance. AHLTA has a central clinical data repository for patient-centric storing and retrieving of DoD medical and dental data from locations worldwide, available around the clock and around the globe to providers regardless of where a beneficiary seeks care.

Major commercial partners providing products and services for the AHLTA product include: Northrop Grumman Information Technology, Science Applications International Corporation (SAIC), Hewlett-Packard, Oracle Corporation, 3M Health Information Systems, Microsoft Corporation, Medicomp Systems Inc., Medcin, SnareWorks, Sun Microsystems, Inc., SeeBeyond, and Tuxedo by BEA Systems. The Department's use of COTS products in AHLTA is driving the commercial marketplace towards greater capabilities in their products, including interoperability, functionality, reliability, and scaleability.

Management Structure

The Assistant Secretary of Defense for Health Affairs ASD(HA) is the principal staff assistant and advisor to the Under Secretary of Defense for Personnel and Readiness USD(P&R) and the Secretary and Deputy Secretary of Defense for all DoD health policies, programs, and activities. In this role, the ASD(HA) is charged with effectively executing the Department's medical mission, which is to maintain readiness and support to members of the Armed Forces during military operations, and to provide medical services and support to members of the Armed Forces, their dependents, and others entitled to DoD medical care. During the past fiscal year, the Office of the Assistant Secretary of Defense for Health Affairs successfully provided services to 9.2 million eligible beneficiaries at 70 Inpatient facilities and over 826 Outpatient clinics located throughout the world. These services were provided by the 131,000 Military Health System personnel and the TRICARE network of over 210,000 private sector physicians.

In carrying out these responsibilities, the ASD(HA) exercises authority to establish policies, procedures, and standards that govern DoD medical programs and serves as Program Manager for all DoD health and medical resources. In addition, the ASD(HA) exercises authority, direction and control over the TRICARE Management Activity (TMA) and is dual-hatted as the Director, TMA. The ASD(HA) serves under the authority, direction and control of the USD(P&R).

The TMA mission is to manage the TRICARE Program, manage and execute the Defense Health Program (DHP) appropriation and the DoD Unified Medical Program of $35.5 billion; and support the Uniformed Services in the implementation of the TRICARE Program. As one of his responsibilities, the Director TMA exercises oversight, management and program direction of IM/IT systems and programs. In support of its mission responsibilities, TMA acquires IT products, such as AHLTA.

The Joint Medical Information Systems (JMIS) Program Executive Office (PEO) resides within TMA under the Director, Information Management, Technology, and Reengineering. The JMIS PEO is responsible for oversight of the various systems to include procurement, development, implementation, deployment, maintenance, and operations of information systems.

The management structure for AHLTA acquisition oversight is in accordance with applicable DoD directives, instructions, and regulations. The Milestone Decision Authority for AHLTA is the Assistant Secretary of Defense (Networks and Information Integration). The ASD(HA) is the AHLTA program sponsor and the Component Acquisition Executive. The AHLTA Program Manager (PM) reports to the JMIS Program Executive Officer within TMA.

In regards to the DoD/VA governance structure for information sharing initiatives, the DoD/VA Joint Executive Council was established in February 2002, and is co-chaired by the Deputy Secretary of Veterans Affairs and the Under Secretary of Defense for Personnel and Readiness. It is comprised of senior leaders from DoD and VA. The Joint Executive Council was created to:

- Ensure the efficient use of federal services and resources; remove barriers and address challenges that impede collaborative efforts
- Enhance DoD and VA collaboration
- Assert and support mutually beneficial opportunities to improve business practices
- Facilitate opportunities to improve resource utilization and to enhance sharing arrangements that ensure high quality cost effective services for both VA and DoD beneficiaries, and
- Develop a joint strategic planning process to guide the direction of joint sharing activities.

The DoD/VA Joint Executive Council produces the Joint Strategic Plan as the primary means to advance performance goals and measure performance results and progress for the ongoing efforts and new initiatives; it is continuously evaluated, updated, and improved. The Joint Strategic Plan serves as the roadmap for the Joint Executive Council and its sub-councils.

The DoD/VA Health Executive Council, overseen by the Joint Executive Council, works to institutionalize DoD and VA sharing and collaboration to ensure efficient use of health services and resources. The Health Executive Council oversees the cooperative efforts of each agency's health care organizations. Through the Health Executive Council, DoD and VA have worked closely to support expanding electronic health information sharing between our Departments.

The Chief Information Officers (CIOs) of the Military Health System and the Veterans Health Administration are responsible for accomplishing the health information technology initiatives

needed to achieve the performance goals described in the Joint Strategic Plan. The CIOs meet on a continuing, routine basis to explore, assess, develop, and monitor joint medical informatics initiatives. Both Chief Information Officers are members of and report bi-monthly to the DoD/VA Health Executive Council which is co-chaired by the ASD(HA) and the VA Undersecretary for Health. Periodically, information management and technology issues also are briefed to the DoD/VA Joint Executive Council.

Additionally, the Health Architecture Interagency Group (HAIG) is responsible for accomplishing the health architecture and standards initiatives needed to achieve the performance goals described in the Joint Strategic Plan. The HAIG is chartered by DoD and VA to facilitate interagency cooperation and oversee DoD/VA Shared Health Architecture Initiatives including initiatives in the DoD/VA Joint Electronic Health Records Interoperability Plan. The HAIG is working towards gaining consensus on common standards for Enterprise Architecture regarding security, communications, data, and technology. The DoD/VA Shared Health Architecture Plan, version 1, was signed by both Departments' medical Chief Enterprise Architects in January 2005. The HAIG meets quarterly and its accomplishments include a joint agency architecture compliance review process for DoD/VA interagency initiatives.

Accountability Measures

The AHLTA PM is responsible for the acquisition and sustainment of a military electronic health record that integrates medical and dental information. The AHLTA oversight and communications are conducted in accordance with DoD 5000 (Series) requirements via quarterly Defense Acquisition Executive Summary (DAES) reports, as needed integrated product team meetings, Milestone Decision reviews, and routine Interim Progress Reviews (IPRs).

The AHLTA PM advises the Senior Medical Military Advisory Council (SMMAC), composed of the Military Health System senior executive leaders and chaired by ASD (HA) on performance measures. The Military Health System's Strategic Balanced Scorecard includes accountability measures for AHLTA. The PM routinely provides reports to the SMMAC on user satisfaction, usage rates, and system performance measures. In regards to accountability on DoD/VA information sharing initiatives, the DoD/VA Joint Strategic Plan includes specific goals and performance metrics. Progress toward meeting Joint Strategic Plan objectives, strategies and key milestones, and performance measures is reported on a monthly basis.

In accordance with both the Information Technology Management Reform Act and the Government Performance and Results Act, the benefits of AHLTA represent measurable impacts of the EHR on clinical and business processes and outcomes within the Military Health System. The AHLTA benefits analysis approach includes a literature review and initial baseline data assessment, benchmarking against civilian practices, risk assessment, and modeling to arrive at the expected benefit outcomes. Post implementation reviews are conducted to determine and validate benefit outcomes.

AHLTA accountability measures are defined in key DoD program acquisition documents, such as, the Operational Requirements Document, Capability Development Document, Capability Production Document, and Acquisition Program Baseline (APB). The DoD Joint Requirements

Oversight Council (JROC) is the approving governance body for the AHLTA requirements and performance measures. The JROC is a four-star panel consisting of the Vice Chairman of the Joint Chiefs Staff and a four-star officer designated by the each of the Services, ensuring that DoD resources are being used to achieve Department goals. In the years 2000, 2002, 2004, and 2005, the JROC reviewed, approved, and validated AHLTA requirements and performance measures, such as security, interoperability, diagnostic coding, system availability and response time. Additionally, the AHLTA APB, which is approved by the DoD Milestone Decision Authority, further delineates measures specific to program cost, schedule, and performance. The AHLTA APB was most recently approved May 2005, with the next review anticipated in the summer, 2006.

AHLTA Development Schedule

AHLTA builds on capabilities of existing systems, subsuming their functionality over time, while adding new functions to meet mission requirements. AHLTA Blocks 1 and 2 provide support capabilities in the ambulatory settings, while the mature system, AHLTA Block 3, extends those capabilities into the inpatient arena. Additionally, the first two Blocks of AHLTA are dependent upon Legacy CHCS for pharmacy, laboratory, radiology, orders, and results. Block 3, the remaining Block to be developed, will assimilate the functionality of Legacy CHCS and inpatient capabilities with AHLTA.

An ASD (NII) Acquisition Decision Memorandum granted Block 3 Milestone A approval in January 2003. Upon completion of competitive source selection process, prototyping began with the commercial pharmacy and laboratory products. After a review of the lessons learned from the prototyping and following a Milestone B approval, the Department will commence development, integration, and testing activities to provide the needed Block 3 capabilities in a deployable product for worldwide implementation at DoD Military Treatment Facilities.

Summary

The Military's EHR supports the critical mission tenets of Force Health Protection and Population Health Improvement. AHLTA directly supports the medical readiness of every Soldier, Sailor, Airman, and Marine for all military operations. The target for Population Health Improvement is prevention and health promotion; it includes all members of the military community: armed forces members, their families, and others entitled to DoD health and dental care.

Force Health Protection and Population Health Improvement both require accurate, timely, and cumulative data concerning the health care of individuals and populations. AHLTA provides the means to gather health care data and assess the health and dental history and status of individuals and the entire Military Health System population. Furthermore, the system provides data for the health care providers to make informed, definitive decisions on the health care of the members of the Armed Forces assigned worldwide, as well as those members deployed as part of contingency operations at home or abroad.

AHLTA provides the capability to document present care, exposure to different environmental or occupational hazards, and retrieve the care record, including dental care and immunizations. These electronic records allow for surveillance, which in turn, enable speedier interventions, preventing illness and aiding in earlier diagnosis and treatments.

The Department has made significant strides in applying health care information technology, in creating electronic health records, and in sharing electronic health care information to health care providers. The timely provision of appropriate information about the patient's care and outcomes to health care providers will enhance the quality of health care delivered. DoD has actively worked to advance the goal of the President's Executive Order to establish an interoperable health record for most Americans within ten years. The Department has established EHRs for its 9.2 million DoD health care beneficiaries, is sharing electronic health information with Federal Health Care Agencies, publishes lessons learned and presents at National Conferences, and has developed IT industry partnerships.

The Department is firmly committed to continued collaboration and the appropriate sharing of health information as systems and data repositories mature and standards and processes are further defined and implemented. Exchanging appropriate health information between Departments, in keeping with applicable privacy and security regulations, will not only enhance the quality of health care delivered, but will also establish a federal model for electronically exchanging medical records.