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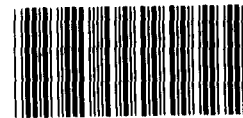
Testimony

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DOD'S ACQUISITION OF THE
COMPOSITE HEALTH CARE SYSTEM

Statement of
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Before the
Subcommittee on Manpower and Personnel
Committee on Armed Services
United States Senate



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Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to comment on Defense's on-going effort to modernize its medical information systems through the Composite Health Care System--commonly known as CHCS.

CHCS is the latest of several attempts at developing a standardized, integrated, automated system that Defense could deploy at its medical facilities worldwide. Problems related to prior efforts and the high cost associated with developing such a system have prompted the Congress in the past three years to direct Defense to implement measures aimed at reducing development risk and controlling costs. These measures included better defining the system's requirements, testing competing offeror systems in a "live" environment--a "fly-before you buy" concept--and testing the feasibility and cost-effectiveness of using an existing Veterans Administration (VA) system.

Congress also directed the General Accounting Office (GAO) to evaluate and report on Defense's acquisition of CHCS and its conduct of the VA system test. In keeping with this directive, GAO will continue to provide information to the Congress on these matters and, if appropriate, raise issues that we believe warrant attention. We recognize that the on-going nature of the CHCS procurement often requires that

these concerns be raised before decisions and actions by Defense are finalized. In this context, we believe we can be most helpful by surfacing these matters as quickly as possible so that needed changes can be implemented in a timely manner.

Defense is applying considerable effort and resources to comply with congressional direction. It is more clearly defining the requirements for CHCS and has recently awarded contracts to four offerors for the development and demonstration of their systems in an operational environment. As mandated by the Congress, Defense is also testing the VA system in two military hospitals.

However, on the basis of our continuing evaluation of Defense's activities, we have raised concerns over whether Defense will have the appropriate information to select a single vendor by its current target date of March 1988. For example, while Defense has modified its acquisition strategy to incorporate operational testing, we believe that Defense may not have sufficient time to complete necessary activities and to perform a test of competing systems to adequately evaluate their capabilities in an operational environment. Likewise, preliminary results from our review at one of the VA system test sites indicate that meaningful information may not be available by October 1, 1987, the

congressionally-mandated completion date for this test.

Today's testimony discusses the evolution of CHCS and the issues we believe should be addressed before Defense, under its current strategy, makes a billion-dollar investment decision in March 1988.

DEFENSE'S EFFORTS TO AUTOMATE
ITS MEDICAL FACILITIES

Defense has been attempting to develop computer support for its hospitals and clinics since 1968. During fiscal years 1976-1984, Defense spent about \$222 million to acquire, implement, and operate various stand-alone and integrated health care computer systems designed to automate a wide range of administrative and medical activities. Within that time frame, the House and Senate Appropriations Committees and the House Committee on Government Operations were especially critical of Defense's management of the development of these systems and the absence of a clear definition of user requirements.

Defense's latest effort--CHCS--is meant to correct past deficiencies. Initiated in 1984, CHCS is a major component of Defense's Tri-Service Medical Information System program, also known as TRIMIS. The TRIMIS program office, under the

Assistant Secretary of Defense (Health Affairs), currently spearheads this effort. CHCS is intended to be deployed at 168 military hospitals and more than 500 clinics worldwide.

DEFENSE'S CHCS

ACQUISITION STRATEGY

In response to growing congressional concerns about the risks associated with the acquisition of these complex and costly medical ADP systems, the Assistant Secretary of Defense (Comptroller) in 1979 directed the TRIMIS program office to follow acquisition guidelines specified in the Office of Management and Budget Circular A-109. This circular instructs federal agencies on how to conduct major hardware and software system acquisitions. Its intentions are twofold: (1) to improve the management process and (2) to minimize risks of inadequate system performance and excessive costs. In 1984, the House and Senate appropriations conferees also directed Defense to use the A-109 strategy.

As a result of this congressional direction and additional guidance from the House and Senate Armed Services Committees, Defense has applied considerable time and effort in developing and modifying a two-stage acquisition strategy. Under its original plan, during Stage I, initial

systems development contracts would be awarded to up to three offerors to develop systems conforming to Defense's specifications. Each offeror would be required to demonstrate a portion of the total system in a offeror-controlled "laboratory" environment. After Defense tested and evaluated each system, a contract for Stage II would be awarded to one of the offerors for deployment at twelve additional military hospitals. On the basis of the system's success in that environment, Defense would then seek approval to deploy the system worldwide.

Defense has since modified its original plan by expanding the field of competition from three to four offerors in May 1986. In addition, at the direction of the Congress, in February 1987 it added a testing phase to be conducted at a "live" operational military medical facility. This direction was provided to reduce the risks associated with acquiring a system that had not been tested in the environment that it was intended to support.

Defense currently is in the midst of Stage I. Four offerors were selected in September 1986, and testing will begin soon. Stage II is planned to begin in March 1988, and the decision to fully deploy CHCS is planned for December 1988. Defense's latest CHCS acquisition cost estimates range from \$800 million to \$1.1 billion depending on the type of

hardware configuration proposed. Since controlling such costs was a matter of congressional concern in the fiscal year 1987 Defense Appropriations process, conferees capped the total life cycle cost of acquiring, operating, and maintaining the CHCS at \$1.1 billion.

As required by the fiscal year 1986 Defense Authorization Act, we reported on Defense's CHCS acquisition strategy in March 1986¹. Although our evaluation showed that Defense had developed a sound methodology for selecting Stage I development offerors, we were concerned that other aspects of Defense's acquisition strategy might limit the CHCS program's success. For example, we found that

- under Defense's original plan, the final contract for CHCS was to be awarded before the selected vendor had demonstrated whether the proposed system could function in a military hospital and
- not all of the functional requirements that had been certified as valid were included in the Request for Proposals for Stage I.

In May 1986, we notified the Assistant Secretary of Defense

¹ADP Systems: Concerns About the Acquisition Plan for DOD's Composite Health Care System (GAO/IMTEC-86-12), March 31, 1986.

(Health Affairs) that we had questions concerning the way that development offeror proposals were being evaluated. Defense believes it has taken the necessary precautions for a fair and competitive evaluation. A report discussing the results of our work on Defense's evaluation and award of development contracts will be issued in a few weeks.

Another matter of concern is the apparent lack of time Defense has allotted to complete system testing. On the basis of the current acquisition schedule, which calls for completion of operational testing by November 1987, we believe Defense may not have sufficient time to complete software development, site preparation, hardware installation, user training, and to perform a test of competing systems to adequately evaluate their capabilities in an operational environment.

We understand that Defense notified the development offerors last week that it is considering a modified acquisition strategy. This strategy would award contracts to two vendors in January 1988--two months earlier than it had originally intended to select a single vendor. We are currently analyzing Defense's approach to operational testing as well as this possible change in acquisition strategy, and will advise the Congress and Defense on our views in the near future.

VA SYSTEM TEST IN A
MILITARY ENVIRONMENT

During May 1984 hearings before the House Committee on Appropriations, the Assistant Secretary of Defense (Health Affairs) was asked whether the TRIMIS program office had evaluated and tested the potential for adapting VA's Decentralized Hospital Computer Program for Defense's use. The Committee expressed concern that Defense would proceed with its CHCS procurement without adequately considering the VA system. During hearings in September 1984, members of the House Committee on Veterans' Affairs also expressed concern that Defense was about to spend substantial sums on the CHCS procurement without adequately considering the VA software. In the same time period, independent of the CHCS program, March Air Force Base hospital personnel were investigating the feasibility of implementing the patient-scheduling portion of the system being used by the VA.

In the fiscal year 1985 appropriations, conferees directed Defense to evaluate the feasibility and cost-effectiveness of using the VA software as an alternative and to continue its test of the VA software at March. In addition, it was directed to include a requirement in its CHCS Stage I procurement that one of the offerors use and adapt existing

VA software for potential TRIMIS use.

In September 1985, we reported on Defense's test of the VA software at March². At that time, we criticized the narrowness of Defense's test proposal; only a portion of available VA software was to be tested. We concluded that restructuring of the test was needed to ensure that the VA software receive a fair evaluation.

Congressional direction on testing the VA system was also provided in both fiscal year 1986 and fiscal year 1987 Defense Authorization Acts. In the fiscal year 1986 legislation, the scope of the test was extended to a larger military facility. Defense subsequently chose Fitzsimons Army Medical Center as that second site. The purpose of the selection of a larger site was to ensure that VA's system would be capable of supporting the information needs of a larger military facility. The fiscal year 1987 legislation reaffirmed the need for such testing and directed that it be completed by October 1, 1987. Defense estimates that the total cost for both tests will be about \$8.3 million.

We are currently monitoring Defense's test of the VA system at both March and Fitzsimons. While testing and user

²DOD Should Restructure the March Air Force Base Test of Veterans Administration-developed Software (GAO/IMTEC-85-14), September 11, 1985

evaluations appear to be proceeding as scheduled at March, preliminary indications from Fitzsimons are that meaningful test results, conducive to an accurate assessment on the feasibility of the VA system's use in a large military facility, will not be completed by the congressionally-mandated date of October 1, 1987. In spite of concerted efforts by VA, Defense, and the Army to expedite project activities, significant delays have occurred--largely because hardware acquisition and site preparation have taken longer than expected. We will keep the Congress advised of Defense's progress on these tests so that an early decision can be made on whether to extend the tests or redirect Defense's efforts.

ISSUES GAO WILL BE
ADDRESSING IN THE FUTURE

Regardless of the solution selected by Defense--using one of its development offerors or going with the VA system--significant expenditures will have to be made. Indeed, once installed, either alternative will require hardware, operating personnel, site preparation, and maintenance. On the basis of current estimates, these costs will probably represent the largest portion of the total system cost. We believe that software differences will be the primary reason for cost differences between the system acquired through the

competitive procurement and one based on the VA system. However, because of the large amount of hardware needed, software development costs are small in comparison to the balance of the system costs. We view our role in evaluating the CHCS acquisition as one of providing the Congress with an informed assessment on whether Defense has selected a CHCS solution capable of meeting its needs in a cost-effective manner. We are addressing this very complex question by focusing our work on three issues:

1. Is the CHCS competitive procurement process following established procurement regulations which ensure fair and open competition, and are test results and other evaluations supportive of Defense's vendor selection(s)?
2. Is the alternative of using VA's system being given a fair and reasonable evaluation at March and Fitzsimons and is Defense adequately incorporating these test results in selecting its CHCS solution?
3. Is Defense properly factoring in costs and benefits of its requirements in designing an affordable system?

In addressing the last issue, we will be considering the cost-effectiveness of the CHCS and VA system as a whole. It is possible that Defense's need for additional computer

capacity to meet mobilization requirements might be better satisfied by combining the CHCS and VA systems if they were more alike. Likewise, because it is considering significant expenditures for expanding its own system, it is possible that VA might benefit from the CHCS solution.

In summary, we believe that the potential billion-dollar investment the government will make to deploy the CHCS warrants a sound acquisition strategy that appropriately considers needs, performance, and costs. We will continue to assist the Congress in ensuring that the money is well spent.

This concludes my testimony, Mr. Chairman. I will be pleased to answer any questions that you or others may have at this time.