HOSPITAL INFORMATION SYSTEMS AT THE VETERANS ADMINISTRATION

SUMMARY OF OTA FINDINGS

OTA finds that two time scales must be considered in making decisions concerning Veterans Administration (VA) hospital information systems: both near- and far-term options must be examined.

OTA finds that, in the near term, VA has a limited set of options from which to choose because it has not taken the opportunity in the past to expand its technological options through thorough testing and study of system alternatives. If VA is to implement at least a minimum level of automation in all its hospitals within the next year or two, OTA finds no reasonable alternative to the Decentralized Hospital Computer Program (DHCP). To consider a switch to a commercial system at this time would increase costs and delay implementation in the hospitals. The "Core Plus 8" DHCP modules, assuming they work as expected, seem to offer reasonable features and functions to meet the VA's near-term needs for hospital information.[1]

This special report is limited in scope, and OTA did not make determinations concerning a number of issues, including:

- whether those Core Plus 8 modules still under development or testing will in fact work as the VA expects them to;
- whether the order-entry /results-reporting functions now being developed will prove satisfactory for Core Plus 8 in hospitals with high transaction rates; or
- whether additional modules beyond Core Plus 8 are desirable.

Thus, VA and the relevant congressional oversight committees will need to continue to monitor DHCP status so that these key issues can be determined.

In the long term, DHCP may have limitations that could make it an unsuitable platform for a transition to the information system VA will need in the 1990s. Some of the members of this study% Advisory Panel and its Federal Working Group have raised

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1. See OTA contractor report by Sheldon L Dorenfest and Associates, Ltd.: "Evaluation of Hospital Information Systems for the Veterans Administration" (Draft), Sept. 10, 1987, pp. 2 and 20-30. Dorenfest recommended that, "The Core Plus 8 version of DHCP should be adopted as the foundation for meeting future VA hospital information system requirements." In response to OTA's request for clarification as to the time frame considered for "future", Dorenfest specified that its recommendations were made, "within the context of the 10-year systems life cycle used by the VA" [i.e. until 1996]. Source: Letter from Ronald Gue (Dorenfest) to OTA, Sept. 14, 1987.

and noted the importance of this issue, citing possible limitations due to DHCP's choices of system architecture, database structure, and computer language. In OTA's view, fundamental questions have been raised that the VA will need to examine fully. The VA and the rest of the health care community are still quite low on the learning curve for integrated hospital information systems. Given the relative newness of the field, it would be unreasonable to expect any first-generation system to contain an optimal set of features, or to have a long useful life span.[2]

OTA finds that if VA wishes to reap the benefits of technological change, it needs to begin now to do long-term planning that can examine technological alternatives for the next generation of hospital information technology. VA's current planning process focuses on continual revisions to and evolution of the DHCP software, and does not provide an appropriate mechanism for exploring needs, opportunities, and alternative options for the next generation.

OTA finds that VA needs to ensure that its long-range planning process has the following characteristics:

- it must include top VA management and be given priority and support by top management;
- it should not have to compete for resources with the ongoing DHCP development, deployment, operations, and maintenance activities -- that is, these near-term needs must not be allowed to drain off resources needed for long-term planning;
- it is sufficiently separated, administratively and operationally, from ongoing DHCP production activities to ensure that the long-range planning processes[3] protected from internal biases;

2. In this paper the terms 'first-generation' or "next-generation" refer to the information system deployed, not to the programming language.
3. It is common organizational practice to separate planning and research and development activities for the next generation product from those for the current generation product. In the computer industry, for example, staff and activities devoted to a new-generation product are administratively, even geographically, separated in order to preserve their independence and avoid biases; it is not considered feasible to expect individuals who are stakeholders in the current generation product to take a detached look at it for the purposes of long-range planning. For one description of this process in the computer industry, see: Tracy Kidder, The Soul of a New Machine (Boston/Toronto: An Atlantic Monthly Press Book, Little, Brown & Co., 1981).

- it remains in touch with users' needs so that it does not become an empty, "blue-sky" intellectual exercise; and
- it makes use of a wide range of expertise from outside VA.

Many other Federal agencies are already planning for information systems that will be in place in the late 1990's or beyond. Some of these, such as the Federal Aviation Administration (FAA), are examining multiple competing technological alternatives. Because of the complexity and scale of agency information systems, and because of the temporal realities of cyclic Federal procurements, even if VA begins to plan now for its next-generation system, the system may not be in place until the end of the century.

The options discussed in this special report offer to the Congress some possible mechanisms for allowing VA to pursue its preferred course of action while at the same time insuring Congressional oversight in the face of possible risk. In addition, they give Congress mechanisms for encouraging VA to begin the processes of strategic planning and consideration of technological alternatives before VA commits itself to a "next generation" hospital information system.

The two options explored in the Special Report are:

1. Deploy the Core Plus 8 software system-wide, then cap hardware expenditures and freeze development of additional software modules. Allow VA to enter a "plateau" phase for strategic planning and evaluation of technological alternatives for its next generation information system.
2. Continue deployment of Core Plus 8 and begin parallel efforts for strategic planning and evaluation of alternatives for the next-generation system. Make release of additional funds contingent upon VA'S demonstration that: a) order-entry/results-reporting works satisfactorily in a high-transaction production environment, and b) suitable processes are underway for strategic planning and evaluation of technological alternatives for the next-generation information system.

Both options have advantages and drawbacks. Option 1 assures some control over further expenditures for DHCP and provides a clean break from DHCP development activities in order for the VA to devote agency attention to planning for the next generation. Its chief drawback is that it delays the start of the planning process for about three years.

Option 2 allows the planning process to begin immediately, but there is risk that VA is too locked into its current development process to focus adequately on alternative strategies for the next generation.