

April 1990

**INFORMATION
RESOURCES**

**Management
Commitment Needed
to Meet Information
Challenges**





United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

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April 19, 1990

The Honorable Edward J. Derwinski
The Secretary of Veterans Affairs

Dear Mr. Secretary:

This report presents the results of our review of the Department of Veterans Affairs' (VA) information resources management (IRM) and represents a segment of an ongoing general management review. Our objective was to assess the effectiveness of VA's information resources in supporting its mission. We focused on central IRM management practices and departmentwide information needs. In working with the Assistant Secretary for Information Resources Management, we provided detailed briefings throughout our review and assessed VA's current initiatives to (1) reorganize its IRM office, (2) develop an IRM planning process, and (3) consider a departmentwide information system. See appendix I for our objective, scope, and methodology.

As part of the general management review, our Human Resources Division is working with your office and has provided briefings on a departmentwide strategic planning framework. The results of these briefings will be documented and reported in the near future. In addition, our Accounting and Financial Management Division is analyzing VA's financial management activities and is working closely with the Assistant Secretary for Finance and Planning. Other reviews covering management issues, such as human resources, may be initiated at a later date.

Results in Brief

VA top managers do not have information readily available to assess the quality of health care or the effectiveness of services provided to veterans. VA information is contained in over 150 fragmented automated systems and multiple, ad hoc manual systems. The information in these systems is not efficiently collected nor can it be easily accessed by VA officials. Further, information is duplicated throughout the systems, cannot be effectively integrated and shared, and often is incomplete, inaccurate, or late. As a result, IRM weaknesses have hindered VA's ability to effectively manage programs and have contributed to service delays.

VA does not have a structured approach to systematically plan, prioritize, and implement all aspects of its near- and long-term information needs. Consequently, the agency can not effectively evaluate its own

performance and fix accounting, medical, benefits, and national security, but they have not improved or implemented policies for information sharing.

VA recognizes that significant services to veterans and health care streamlining its central IRM would include strategic IRM require management's control all IRM and program officials.

Background

On March 15, 1989, VA was better serving our nation's 240,000 people, has a budget major program components: Services and Research Administration, the nation's largest health care system, providing over \$15 billion in education benefits and over 3 million (3) National Cemetery System cemeteries, as well as headstones and markers in 100,000 cemeteries.

VA's use of information resources is inefficient. It relies on many automated systems and their dependents. In 1990, VA plans to spend about \$1 billion and in addition is planning programs costing over a billion dollars through 1994.

Information Systems Do Not Readily Provide Needed Data

We found that information systems do not readily provide the data needed for billion dollar programs. While data is available locally at VA locations through office managers to prompt systems are not integrated, manual processing which is labor intensive.

prone. Consequently, VA executives and program managers can not easily and readily get information on critical issues such as quality of health care, efficiency of benefit services, and operational costs. Specifically,

- VA top managers can not readily obtain the information necessary to determine the quality of health care provided to veterans. Several systems maintain medical information; however, they do not capture key data contained on physician's records. For example, automated systems do not include a patient's diagnosis at admission or discharge, or the specific cause of death. Additionally, automated information that is contained locally at medical centers can not easily or promptly be accessed by central office. According to an Acting Chief Medical Director, it is a very difficult and time-consuming process to determine the quality of health care because local systems are decentralized and do not automatically exchange data. As a result, VA top managers can not easily obtain information to develop nationwide performance indicators to monitor and analyze the health care given.¹
- VA has significant problems recruiting and retaining nurses, but it can not easily get information to analyze attrition or retention trend data. It must access five different automated systems and manually compile the results in submitting resource requirements to Congress. Consequently, nursing statistics reported to congressional committees may be outdated by more than a year.
- VA central office managers do not have information readily available to determine if medical centers appropriately verify physicians' credentials. This information is compiled and maintained by local VA medical centers; however, it is not easily accessible by central office officials. We reported² that VA was not effectively monitoring the credentialing of physicians. After examining 207 case files of physicians hired by VA between 1986 and 1988, we found that only 102 verifications were made and properly documented. The failure to verify every applicant's license and document this verification violates VA policy. Thus, VA can not guarantee that all its physicians are properly licensed and certified. Further, in December 1989, VA identified the credentialing of physicians as a material weakness in its Financial Integrity Act report.³

¹In its report, Interim Report to the Chief Medical Director, prepared by the Strategic Information Systems Planning Committee, Apr. 5, 1989, VA recognizes that limited efforts have been made using automation to monitor the health care outcome of patients.

²Improvements Needed in Procedures to Assure Physicians are Qualified (GAO/HRD-89-77, Aug. 1989).

³Federal Managers Financial Integrity Act, Public Law 97-255, Sept. 8, 1982.

- VA's central office program managers have access to benefit information; however, it is not in a useful format to allow managers to effectively monitor benefit processing activities or readily answer questions from Congress. According to the Director, Compensation and Pension, VA collects information on overall timeliness of services; however, these data are not broken out among various program functions, such as the timeliness of the appeals process versus that of adjudication. As a result, VA can not effectively identify and monitor individual program performance. Further, another program manager indicated that information is received in a "piecemeal" fashion making it difficult to readily answer questions from Congress and others on regional office activities.
- VA lacks reliable cost information. For example, it does not know the actual costs of treating patients for specific illnesses,⁴ nor does it know the relative cost of obtaining long-term care services through different nursing home options⁵ As such, VA does not readily know if it is effectively using its resources to administer health care. This type of information is also important to Congress in making funding decisions and overseeing services provided to veterans—especially with today's budget constraints.

These information weaknesses exist because VA's (1) departmentwide management information does not readily provide managers the data necessary to effectively monitor programs, (2) automated systems do not effectively integrate and share data, and (3) systems are redundant and require intensive manual processing.

Management Information System

VA program and management information is contained in over 150 automated systems and multiple manual systems located throughout the country. Many of these systems provide specific information for individual programs. For example, there are several systems that collect personnel, medical, and benefits information. While these systems support individual program activities, they do not provide comprehensive and consistent departmentwide information for the agency.

⁴Improving Operations of Federal Departments and Agencies (GAO/OP-89-1, Mar. 1989).

⁵Veterans Affairs Issues (GAO/OCG-89-14TR, Nov. 1988).

Departmentwide information is maintained in an automated management information system called AMIS⁶. However, this system was developed in the 1960s, is antiquated, and uses sequential (batch) processing, which is much slower, harder to maintain, and less efficient compared to current technology. AMIS collects a variety of information contained in many of the program specific systems including personnel, accounting, medical patient and veterans' benefit data. This information is obtained from (1) computer files produced automatically, (2) multiple systems that are not compatible and do not automatically exchange data, and (3) manually developing and collecting data. Consequently, VA field (medical centers and regional offices) and headquarters staff must manually code and enter data, taking 6 to 8 weeks to collect and process information before VA management obtains a report. Further, the system has limited capabilities to provide information other than standard reports. Should corrections or additional information be needed, it normally takes 3 months to change the system. And, finally, because of the labor intensive coding required, field staff frequently input erroneous data and do not keep the system up-to-date.

An effective departmentwide management information system would provide data necessary to address critical mission-related issues. Such a system would give VA managers prompt, reliable, complete, and consistent data to monitor and assess program performance pertaining to the quality and efficiency of services delivered to veterans. For example, the Assistant Secretary for Finance and Planning stated that VA needs information to answer questions concerning operational matters, such as how much money is spent on AIDS (Acquired Immune Deficiency Syndrome). However, VA does not have an effective management information system to collect and compile data scattered in many systems across the country.

Ineffective Integration

VA's systems are incompatible and cannot readily exchange data among its major components and with external agencies, such as the Department of Defense. To illustrate, a medical examination is required when a veteran applies for disability payments. This involves a paper-intensive process—exchanging records between VA's benefits and medical component. Further, VA has to wait on average 2 months to obtain Defense records documenting military service. According to VA officials, a 2- or 3-

⁶Overall management information is collected in AMIS and is widely used by program managers at many levels of the VA as their principal source of work load data and aggregate information on regional and national activities.

month delay for a veteran to obtain benefits is not unusual. Because of inefficient automation and other critical factors, such as a reduction in staff and legislative changes concerning program eligibility criteria, the Chief Benefits Director testified that "it now takes an average of 152 days to process an original claim for disability compensation."

System Redundancies and Manual Processing

VA's systems also contain redundant information and require labor-intensive, manual processing. Each VA program relies on a separate automated or manual system but requires some of the same basic data—i.e., the veteran's name, address, social security number, and length of service. Maintaining duplicative data is expensive and can also lead to errors that delay service. For example, discrepancies between systems in a veteran's social security number may take months to correct, delaying some of the veteran's benefit payments. Additionally, the lack of automation has contributed to a backlog of almost 340,000 adjudication claims cases pending in 1989. Performing intensive manual processing and maintaining duplicative information are expensive. VA officials admit that duplication and redundancies are problems but have not measured their extent or cost.

To overcome these inefficiencies, VA has initiated multiple automated projects to enhance the timeliness, accuracy, and availability of data⁷ For example, the medical component is automating information on quality of care, and the benefits component is modernizing its labor-intensive benefit process. The components have also identified projects to automatically exchange information between medical centers and regional benefit offices. However, several factors may hinder the effective development and implementation of these initiatives.

Factors Hindering Effective IRM

Significant IRM weaknesses, inadequate management information, and inefficient systems exist because VA has not (1) completed a long-term departmentwide planning process to guide IRM information needs, (2) established departmentwide IRM priorities, and (3) established policies to foster data-sharing and systems integration among components. Further, another factor impeding the development of an efficient and effective IRM program is the autonomous nature in which VA's major components operate. Although individual components continue to

⁷In *Veterans Administration Information Resources Management Is Improving* (GAO/IMTEC-88-17, Jan. 1988), we noted that the components are striving to correct IRM deficiencies.

improve services through automation, their efforts have not effectively supported VA as a whole.

As highlighted in our recent symposium,⁸ the most successful automation efforts begin with a top manager who has a clear vision of how information technology can benefit the organization, and a commitment to making this vision a reality. Without this clear direction and support from the top, IRM initiatives tend to degenerate into loose collections of independent systems. Often these systems are developed by technical managers who narrowly focus on their individual unit's needs rather than the organization's larger mission and goals.

VA recognizes that the Secretary must clearly define his vision, but the agency lacks a long-term agency planning process to support its mission. VA is now developing a framework for the planning process. IRM should support this long-term vision and planning effort with the necessary tools and information to enable managers to (1) evaluate VA's performance and (2) identify appropriate accountability.

Once VA's planning efforts establish specific long-term goals and identify supporting information needs, IRM priorities need to be determined. VA has not implemented a process to analyze and prioritize its departmentwide IRM initiatives. Instead, each component is analyzing its own information needs and defining the essential characteristics of its systems environment⁹. Without established priorities VA does not know what IRM initiatives are most critical to its mission. As a result, VA has no guarantee that its limited IRM resources are effectively used to meet agency-wide needs.

VA has neither fully developed nor effectively implemented IRM policies. Policies are important to provide overall agency perspective and direction to information/technology acquisition, development, and use. Policies help ensure that separate components develop compatible systems that share data and are coordinated. Specifically, these policies would include systems development life-cycle management, ownership of data,

⁸Meeting the Government's Technology Challenge (Oct. 4 and 5, 1989), provided a forum that brought together top-level executives responsible for implementing IRM programs to explore better ways of using information technology.

⁹The essential characteristics of a systems environment include critical hardware, software, telecommunications, and information repository requirements and standards (e.g., data communication protocol standards, programming language standards, standard data definitions and software engineering standards).

prototyping,¹⁰ interconnectivity,¹¹ and interoperability.¹² Although VA has provided some guidance on interconnectivity and interoperability, such as telecommunications and computer operating systems standards, it has not developed comprehensive policies for these and other systems development issues. Also, while VA has issued a policy governing the ownership of data, it has not been effectively implemented. The policy states that data belong to VA, but each component defines and maintains data in individual systems belonging to the component, not the agency. The lack of comprehensive IRM policies has contributed to VA's problems with data redundancies and its piecemeal approach to automation.

We also found that VA's major components operate autonomously, thereby hindering effective implementation of the IRM program. The central IRM office and its counterparts in the individual components do not work easily or cohesively together. According to a VA consultant, "... independent components care only about their programs and do not see the department as a whole. The real power for IRM does not reside with the senior official [Assistant Secretary for IRM], but in each administration [component]." Although the central IRM office is charged with implementing policies, reviewing procurements, and giving its counterparts technical support, many key IRM officials view this support as a burden that does not provide effective service. According to one component official, "confrontation is the norm when dealing with IRM" [the central IRM office]. This attitude has hindered VA's recent actions to improve user services and build a partnership among the various IRM offices.

VA Actions to Improve IRM

Recognizing its IRM deficiencies, VA has initiated three major projects to improve operations: (1) reorganizing its central office IRM activities to streamline functions and improve coordination, (2) developing a strategic IRM planning process¹³ to set priorities, and (3) planning a management information system to answer critical mission-related questions.

¹⁰Prototyping is an approach to defining system requirements by providing users a working model of the system that can be easily revised based on user feedback. Resources are not expended to build the "final" version of the system until requirements are clearly understood and defined based on user experience with the prototypes.

¹¹Interconnectivity is the ability to link equipment electronically, e.g., to attach to a network and send and receive data.

¹²Interoperability is the ability of systems to work together, e.g., to send and interpret messages, share data, etc.

¹³On January 26, 1990, the Secretary approved the IRM strategic planning process.

We commented to VA officials on these three initiatives. Specifically on VA's first initiative to reorganize, we noted that:

- Given VA's autonomous and decentralized work environment and the controversial climate between the central IRM office and the component IRM offices, VA needs a customer liaison office. This office would provide an independent mediator to help resolve significant IRM issues. This would improve coordination, foster working relationships, and improve communication.
- Policy functions and responsibility for defining and controlling VA information resources management requirements should be consolidated and elevated within the central office IRM reorganization. The function should define system development procedures for VA. The guidance should be broad enough to allow components the latitude to build systems that meet unique program needs, yet specific enough to ensure that information can be shared across the agency. Additionally, VA's central IRM office should initiate post-implementation reviews to learn whether individual components follow departmentwide policies.
- Executives from VA's components should be trained in IRM concepts and principles to foster an understanding of the importance and value of sharing information across the agency. This would facilitate communication between the central IRM office and components to support critical decisions in planning, prioritizing, and implementing technology.

VA's Assistant Secretary for IRM considered our comments and also circulated the proposed reorganization, obtaining comments from major components. Based on these comments, VA incorporated our recommendations and other suggestions into its approved reorganization.

Regarding VA's second initiative, to develop a strategic IRM planning process, we commented that initially (1) the process did not include sufficient input from IRM component officials (such as, the medical and benefits offices) and (2) there was no specific guidance from the Secretary on VA goals. After discussing these comments with us and VA officials, the Assistant Secretary for IRM expanded the planning process¹⁴ to ensure that all IRM and program component officials were represented in developing the plan. Further, on October 6, 1989, the Secretary issued a directive to all components expressing the importance of implementing an effective IRM program. According to the Secretary, (1) IRM planning

¹⁴On October 6, 1989, the Secretary signed a memorandum establishing the framework for a strategic IRM planning, programming, and budgeting process for the agency.

should support overall agency plans and goals and (2) communication and coordination among all VA components are essential and must be enhanced.

VA's third initiative, a departmentwide information system for executives is conceptually sound and critical to improving agency management. The project is intended to give VA executives and program managers easy access to agency information by (1) identifying where data resides and assessing information needs, (2) providing the technical capabilities required to bridge data gaps scattered throughout the component systems, and (3) replacing manual data input with an updated automated process. In addition, the project is designed to begin standardizing data elements and definitions, reducing redundant data, and facilitating the sharing of information among the agency's multiple systems.

In briefings with the Assistant Secretary for IRM, we commented that the project's potential benefits may not be realized because key factors have hindered initial efforts. First, the Secretary's long-term vision is needed to guide this effort so that departmentwide goals and objectives can be translated into information needed to monitor performance and make critical decisions. Second, VA must develop an approach that proactively involves program officials and IRM managers across the agency. This is important because information needs must be defined by the component executives and program managers who will use the data to carry out their respective oversight and operational responsibilities.

The Assistant Secretary for IRM agreed with our comments, but, despite the lack of departmentwide guidance, felt that the project to develop an information management system should proceed. Therefore, his office continued briefings and prototype demonstrations to VA officials. While the Office of the Secretary agrees with the concept of a departmentwide information system for executives, it is not convinced that the proposed initiative would identify and provide needed information. Consequently, the project has not been fully staffed and has not received funding.

Conclusions

Significant information weaknesses have hindered VA's ability to effectively manage programs and have contributed to service delays. VA has acted to improve its IRM program, but lasting improvements will require conscious change in the organizational culture. This means that the components and the central office must work together to create a climate of trust, open communication, and mutual support. Nothing less will serve

the veterans' best interests. This shift in organizational culture reflects the Secretary's vision and will require every manager's cooperation and commitment. VA's information problems cannot be overcome without such a change. For example, to overcome the old pitfall of compartmentalizing data, VA needs to be proactive in helping its executives understand how data sharing across the organization benefits everyone and enables managers to accurately know veterans' most pressing concerns. If managers keep working to build a partnership and reach consensus, IRM would improve services to veterans.

Once its IRM reorganization and long-term IRM planning process are in place, VA can set priorities and assess its information needs. But this fundamental step is only a beginning: other critical initiatives need to be implemented. A comprehensive analysis of information needed by VA managers is essential to ensure that significant issues facing the agency can be readily identified, assessed, and resolved. By taking the initial steps to improve its departmentwide information resources, VA can build the foundation for data sharing across the agency. In addition, VA needs to follow through on its initiatives in implementing policies, post-implementation reviews, and its customer liaison function to ensure it is effectively providing service to its users. The Secretary's ongoing commitment is needed to ensure that IRM initiatives are effectively prioritized, integrated, streamlined, and supportive of VA as a whole.

Recommendation

We recommend that the Secretary provide the commitment and resources needed to improve the agency's information resources management. This would include

- ensuring that VA top managers' information needs are identified and that they support the goals and objectives of the agency's long-range plans;
- developing a working group from the major IRM and program components and assigning a full-time project manager to analyze the information requirements for VA's mission. This would entail working with the components to identify what information (1) exists and where it resides, (2) needs to be shared, and (3) needs to be created.

Agency Comments and Our Evaluation

We received oral comments from both the Assistant Secretary for IRM and the Office of the Secretary. The Assistant Secretary for IRM agreed with the report's contents and has acted upon recommendations we provided during our review. Additionally, the Assistant Secretary for IRM

told us that this report helped him gain a broad perspective of the IRM challenges facing VA.

The Office of the Secretary generally agreed with the report's contents; however, expressed concerns that the analysis, findings, and recommendations found in the report were not as detailed or prescriptive as would be necessary to assist the Secretary in addressing the matters that GAO raised. The Office of the Secretary also indicated that detailed systems reviews would be necessary to provide the guidance needed for corrective actions. We agree that automated system reviews would be helpful in identifying specific recommendations and believe that VA should continually assess and monitor individual systems.

We are providing copies of this report to interested members of Congress, executive branch agencies, and the public. We will also make copies available to others upon request. This work was performed under the direction of Jack L. Brock, Jr., Director, Government Information and Financial Management, who can be reached at (202) 275-3195. Other major contributors are listed in appendix II.

Sincerely yours,



Ralph V. Carlone
Assistant Comptroller General

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Abbreviations

AMIS	Automated Management Information System
VA	Department of Veterans Affairs
GAO	General Accounting Office
IMTEC	Information Management and Technology Division
IRM	Information Resources Management

Objective, Scope, and Methodology

The objective of our management review was to assess the effectiveness of VA's information resources in supporting its mission and to work with the Assistant Secretary for IRM in developing specific recommendations on how VA can bring about and sustain needed improvements. We focused on central IRM management practices and assessed VA's current initiatives: (1) reorganizing its IRM office, (2) developing a strategic IRM planning process, and (3) considering a departmentwide management information system.

Our work was primarily conducted at VA's central office in Washington, D.C. To assess field operations and service to veterans, we also visited a medical center and a regional benefits office in Washington, D.C.; a data processing center in Austin, Texas; and a medical center in West Roxbury, Massachusetts.

We interviewed top program and IRM officials to gain an understanding of the challenges they face in managing information. We also discussed perceptions of VA's IRM deficiencies and needed corrective actions with key officials at the General Services Administration, Office of Management and Budget, and national veterans' service organizations. Additionally, we also had a consultant help us analyze VA's proposed reorganization and develop specific recommendations. And finally, to understand long-standing IRM deficiencies, we analyzed congressional hearings and legislation, consultant studies, reports from GAO and other agencies, and other pertinent documents.

We conducted our review from June to November 1989, in accordance with generally accepted government auditing standards. We obtained official agency comments on a draft of this report from VA's Office of the Secretary and the Assistant Secretary for IRM, and have incorporated their comments where appropriate.

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