



United States  
General Accounting Office  
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Accounting and Information  
Management Division

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October 22, 1993

The Honorable Cliff Stearns  
Ranking Minority Member  
Subcommittee on Commerce, Consumer  
Protection, and Competitiveness  
Committee on Energy and Commerce  
House of Representatives

Dear Congressman Stearns:

In 1992 nationwide health care cost over \$800 billion and generated an estimated ten billion pages of medical records. Currently most medical organizations keep their records in manual, paper-intensive systems that, when compared to the automated systems used by such industries as banking and the airlines, are often slow in retrieving and transferring information, are labor intensive, and require huge amounts of storage. These shortfalls increase the difficulty of evaluating the costs and effectiveness of health care. Because timely and reliable information is considered to be a critical element in efforts to reform the health care system, the President's proposal calls for sharing automated medical information electronically.

In response to your request, we are providing information on issues that need to be addressed to take advantage of information technology to improve the cost and performance of health care services to the public. In subsequent discussions with your office, we agreed to provide you with information summarizing our past reports that address the benefits and barriers of automating medical information,<sup>1</sup> including issues addressed by the Department of Defense (DOD) in its development of the Composite Health Care System (CHCS).

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<sup>1</sup>Medical ADP Systems: Automated Medical Records Hold Promise to Improve Patient Care (GAO/IMTEC-91-5, Jan. 22, 1991); Automated Medical Records: Leadership Needed to Expedite Standards Development (GAO/IMTEC-93-17, Apr. 30, 1993); and Medical ADP Systems: Composite Health Care System Is Not Ready to be Deployed (GAO/IMTEC-92-54, May 20, 1993).

In general, we have found that automated medical information offers great potential for improving patient care and reducing costs, but that several barriers will need to be overcome to realize these benefits.

Benefits of Automating  
Medical Information

Automated medical information provides numerous opportunities, including speeding physicians' access to patient data, providing more complete and accurate records, giving health care providers more information for decision-making, and providing information for comparing the effectiveness of treatments and procedures. Cost-related benefits of automating medical information include reducing the need for paper records processing (i.e., preparation, distribution, storage, and retrieval) and costly duplicate medical diagnostic tests.

Barriers to Automating  
Medical Information

Major barriers impeding the automation of medical information include (1) the lack of standards, (2) legal questions related to using automated medical information, (3) issues concerning the privacy of medical information, and (4) health care providers resistance to using available technology.

While there is some agreement that four broad categories of standards--vocabulary, structure and content, messaging, and security--need to be developed, consensus on specific standards has not yet emerged. Efforts to develop these standards have been impeded because no one has assumed a leadership role. Several voluntary organizations have been most active in developing standards. However, the complex nature of medical care, the large number of standards that are needed, and the various special interests involved have made developing standards a daunting task. Without the leadership to set priorities, marshal resources, coordinate activities, and facilitate consensus-building, standards development efforts have yielded meager results. To date, the federal role in developing automated medical record standards has been limited.

Another barrier is that the legal implications of automating patient records have not yet been clearly

defined. Questions remain on whether these records will comply with accreditation standards and regulatory requirements, and the extent to which their use complies with federal and state privacy laws.

Concerns also exist that personally sensitive data contained in automated records could in some instances be more vulnerable to unauthorized access, alteration, and destruction. This is because automated records tend to be accessible to users in many locations and these users could potentially search thousands of files with relative ease. Security standards and requirements need to be established to ensure that privacy issues are addressed.

Finally, user resistance has been identified as a major obstacle to greater use of automated medical information. Easier data entry methods are needed to minimize the impact on providing medical services while providing a cost-effective, timely, and efficient way to record patient data. For example, physician dissatisfaction with the length of time needed to enter orders resulted in DOD deferring the implementation of CHCS' inpatient order entry feature. As a result, DOD is redesigning this feature to streamline data entry.

Summary of Our Conclusions,  
Recommendations, and Matters  
for Congressional Consideration

The government and the private sector have a great deal at stake in automating medical information. For the government, the federal share of U.S. health care expenditures exceeded \$250 billion in 1992 and this amount is growing. We believe that automated medical information has the potential to reduce costs, while improving patient care and increasing efficiency. However, more needs to be done to bring these benefits to fruition. In this process, health care providers, insurers, and the government all have a role to play. In this regard, we previously made recommendations to the Department of Health and Human Services (HHS) and provided matters for congressional consideration which we still support.

HHS' mandate to facilitate and conduct outcomes research and disseminate research findings and guidelines places it in an ideal position to provide leadership in

automating patient information. As such, we recommended that the Secretary of HHS:

- direct the Public Health Service, through its Agency of Health Care Policy and Research (AHCPR), to support the exploration of ways in which automated medical records could be used to more effectively and efficiently provide data for outcomes research; and
- develop a plan and a budget, for consideration by the Congress, to bring about the greater use of automated medical records. This plan could include a national forum that sets goals for automating medical information, addresses individual and organizational concerns about automated medical records, and identifies incentives to induce health care organizations to increase their use of automation.

In addition, because the lack of standards has been a fundamental barrier to efforts to developing automated records, we believe that Congress should consider taking action to enhance federal involvement in the development of automated medical record standards. In particular, leadership is needed to set development priorities, marshal resources to implement the priorities in a timely fashion, coordinate activities, and facilitate consensus-building among the diverse interests that comprise the U.S. health care community.

The key issue for the Congress to decide is how to best provide the leadership necessary to expedite medical record standards development. We believe the decision can best be made following Congressional deliberations on the following options:

1. Keep leadership in the private sector by providing resources to a private organization that is already attempting to coordinate standards development activities. Assistance could include directing the National Institute of Standards and Technology to provide technical and administrative support to bolster ongoing work.
2. Give standards development a more prominent role in the federal government. This could be achieved by (a) directing AHCPR to exercise its authority and make standards development a top priority, or (b) elevating the level of federal authority in medical

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record standards development from AHCPR to the Secretary of HHS.

Once a clearly defined leadership role has been assigned, the following actions could be considered.

- Establish time frames for the organizations developing automated medical record standards.
- Create a range of incentives for timely completion of standards development, such as (1) tying the use of standardized medical records to Medicare reimbursement and (2) funding pilot projects demonstrating the technology required to implement standards and share information in the complex health care setting.
- Work with standards development organizations and involved federal agencies to determine private and federal information needs and, on the basis of these needs, set standards development priorities.

Should you have any questions, please contact me at (202) 512-6252.

Sincerely yours,



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