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HEALTH CARE

Benefits and Barriers to
Automated Medical Records

Statement for the Record by Frank W. Reilly, Director
Information Resources Management/
Health, Education, and Human Services
Accounting and Information Management Division



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Mr. Chairman and Members of the Committee:

We are pleased to submit this statement for the record today on the importance of information technology to controlling the cost and improving health care services to the public. The Committee asked that we provide this statement to highlight information technology issues that need to be considered in weighing health care reform proposals.

In 1994, health care costs are expected to account for over one-seventh of the U.S. economy, or over \$1 trillion. This level of spending, its continuing growth, and the lack of standardized health care information on the types of care being provided and measurable results, raise concern over whether our nation is getting full value for each health care dollar. Our recent analysis of the gross domestic product (GDP)¹ found that the United States ranks higher in health care consumption than Australia, Canada, France, Germany, Italy, Japan, Sweden, and the United Kingdom.²

Our nation's health care services were provided by approximately 650,000 physicians and 6,400 hospitals in 1993. However, the administration has reported that almost 40 million of our

¹GDP is the value of goods and services produced within the United States. It differs only slightly from gross national product (GNP), which is the value of goods and services produced by residents of the United States.

²Budget Issues: GDP Analysis Broadens Budget Debate (GAO/AIMD-94-41, Apr. 27, 1994).

approximately 260 million citizens do not have health insurance for these services. To provide health insurance for every U.S. citizen and to help control health care costs, the administration proposed the Health Security Act in 1993.³ Referred to as health care reform, the act and a number of other Congressional proposals depend on time-critical, health care cost and outcome information, much of which cannot be easily obtained today.

During the last decade, employers have increasingly turned to managed-care health plans in the hope that they will constrain the rising cost of health insurance. Traditional indemnity plans that pay for health services without limiting choice of provider or without preapproval for any hospital or specialty care are losing market share.⁴ In 1992, enrollment in managed-care plans using provider networks grew to more than half of all employees covered by employer group health insurance. To improve their ability to assess health plans, employers are asking for more data on the costs and quality of care.

BENEFITS OF AUTOMATING MEDICAL INFORMATION

Information systems technology offers health care providers numerous opportunities to improve care, control costs, and report

³S. 1757/H.R. 3600

⁴Less than 5 percent of employees are enrolled in traditional health plans.

results. It can provide policymakers, regulators, insurers, employers, researchers, and others with the information needed to oversee health care administration, costs, and quality. However, these opportunities cannot currently be attained, because most health care providers keep patient medical records in manual, paper-intensive systems. When compared to the automated systems used by other record-dependent industries (e.g., airline and banking), health care providers' systems are often slow in retrieving and transferring information, are labor intensive, and require huge amounts of physical storage space.

Improved access to clinical information gives health care providers and administrators tools to better manage the health care industry. Automated patient medical records provide considerably better organization, presentation, and accessibility of data than their paper-record counterparts. Automation can provide computer-based reminders for providing care, generate alerts to possible adverse drug reactions, and help eliminate duplicate clinical procedures. Additionally, automated records can support outcomes research⁵ and other efforts that measure the quality of care and effectiveness of treatments.

Hospitals using automated patient medical records have reported increased staff productivity and potential reductions in

⁵Outcomes research is the evaluation and dissemination of relevant information on the effectiveness of medical treatments.

operating costs. Staff spend less time maintaining records, which allows more time for other duties.

BARRIERS TO AUTOMATING MEDICAL INFORMATION

Timely and reliable clinical data is considered to be a critical element of health care reform; however, there are major barriers to automating medical records and developing a systems framework that can adequately support health care reform. These barriers include

- the lack of standards,
- cost of automation,
- security and privacy issues related to the use of automated medical information, and
- reluctance of health care professionals to use technology.

Lack of Standards

There is some agreement that four broad categories of standards--vocabulary, structure and content, messaging, and security--need to be developed to record and transmit medical data. However, consensus on specific standards has not yet emerged. 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 difficult task. Although several organizations (e.g., the Computer-based Patient Record Institute and the Workgroup for Electronic Data Interchange) have been involved, progress to develop standards have proceeded slowly without the leadership needed to set priorities, marshal resources, coordinate activities, and facilitate consensus-building.

To date, the federal government has not taken a leadership role in developing automated medical record standards. Realizing the need for standards, we are working with the House Committee on Veterans' Affairs to propose legislation that would require the Department of Defense, the Department of Veteran Affairs, and the Indian Health Service to jointly develop a standard computerized patient record.

Cost of Automation

As organizations make plans to initiate or expand automation, budget considerations become a determining factor of how much, where, and how quickly automation can be implemented. The financial resources of health care providers vary, and these resources determine how much can be invested in automation. The cost of automation has limited providers' efforts to further

automating medical records that are currently maintained on paper. However, as systems become more affordable, defined, and widely used, this barrier to automating medical records should diminish.

Security and Privacy Issues

Personally sensitive data contained in automated records could in some instances be more vulnerable to unauthorized access, alteration, and destruction than paper records. 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 protect privacy.

User Reluctance

Finally, user resistance in the medical community has been identified as an obstacle to greater use of automated medical information. While many physicians have accepted new technologies, others have been reluctant to use or accept automated medical information because they believe that automating data entry, such as patient progress notes, may change or limit the way they practice medicine. This is a valid concern; automated data entry methods need to be developed to ease physician use 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 in the Department of Defense's Composite Health Care System's automated inpatient order entry feature resulted in a redesign of this feature.

FEDERAL LEADERSHIP IS NEEDED

We believe that automated medical information has great potential to reduce costs while improving patient care and increasing efficiency. In 1991 and 1993, we reported that more federal involvement was needed to bring these benefits to fruition.⁶ Health care reform further highlights the need for automated medical records and increased federal leadership to design and develop the systems framework needed to adequately support proposed legislative reporting requirements for administrative, financial, and clinical information.

Our Past Recommendations and Matters for Congressional Consideration

We previously made recommendations to the Department of Health and Human Services (HHS) and provided matters for congressional

⁶Medical 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 Automating Medical Information (GAO/AIMD-94-47R, Oct. 22, 1993).

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:⁷

- direct the Public Health Service, through its Agency for 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 develop automated records, we reported that the Congress should consider taking action to enhance federal involvement in the development of automated medical record

⁷GAO/IMTEC-91-5, Jan. 22, 1991.

standards.⁸ 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 this decision requires consideration of the following issues:

- 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.
- Give standards development a more prominent role in the federal government. This could be achieved by (1) directing AHCPR to exercise its authority and make standards development a top priority or (2) elevating the level of federal authority in medical record standards development from AHCPR to the Secretary of HHS.

⁸GAO/IMTEC-93-17, Apr. 30, 1993.

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.

Health Care Reform Will
Require Systems Leadership

A national health care program will require standards and new systems to provide the administrative, financial, and clinical information needed to oversee the program. As we would expect in any health care reform program, the administration's proposed Health Security Act depends on time-critical information to manage and oversee the program. However, it is not yet clear how

this essential information will be obtained, because a systems framework to provide this information has not been defined.

The administration's proposed legislation would establish a National Health Board to be charged with developing and implementing a national health care information system. In this regard, any national health care program will have to address the information resources management (IRM) capabilities needed to meet multiple requirements in such areas as quality assurance, information for consumers and providers, cost containment, and planning and policy development. Specifically, the importance of strategic information management planning, senior IRM leadership, and the technical expertise needed to design, develop, and maintain a nationwide system needs to be recognized. These critical IRM elements need to be firmly established to address high-level systems issues involving privacy and security; fraud, waste, and abuse; and timeliness. Without them, the implementation and effectiveness of any health care reform legislation may be hampered.

Agencies with nationwide information systems, such as the Social Security Administration and the Department of Veterans Affairs, have senior IRM leadership and the technical expertise needed to design, develop, and maintain nationwide systems. In this regard, automation will be needed to help implement health care reform legislation, including systems to manage and control

health security cards and to verify eligibility. For example, the Social Security Administration operates a large-scale system to manage and control one of its largest workloads--the annual issuance of about 17 million new and replacement paper social security cards.

In conclusion, we believe that the successful implementation of any health care legislation will be greatly assisted by having access to timely information needed to manage and oversee the program; conversely, it will be impaired by the lack of such information. Because this information cannot be easily obtained today, strong federal leadership is needed to ensure that adequate steps are taken to design, develop, and implement a systems framework that supports a nationwide program.

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