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HEALTH INFORMATION TECHNOLOGY

HHS is Continuing Efforts to Define a National Strategy

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Accountability ★ Integrity ★ Reliability

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Abbreviations

CHCS	Composite Health Care System
CMS	Centers for Medicare and Medicaid Services
Community	American Health Information Community
DOD	Department of Defense
EHR	electronic health record
HHS	Department of Health and Human Services
IT	information technology
NIST	National Institute for Standards and Technology
ONC	Office of the National Coordinator for Health Information Technology
OPM	Office of Personnel Management
VA	Department of Veterans Affairs

HEALTH INFORMATION TECHNOLOGY

HHS is Continuing Efforts to Define a National Strategy

Why GAO Did This Study

As GAO and others have reported, the use of information technology (IT) has enormous potential to improve the quality of health care and is critical to improving the performance of the U.S. health care system. Given the federal government's influence in the health care industry, it has been urged over the years to take a leadership role in driving change to improve the quality and effectiveness of medical care, including the adoption of IT. In April 2004, President Bush called for widespread adoption of inter-operable electronic health records within 10 years; established the position of the National Coordinator for Health IT, who was appointed in May 2004 and released a framework for strategic action two months later. In May 2005, GAO recommended that HHS establish detailed plans and milestones for each phase of the framework and take steps to ensure that those plans are followed and milestones are met. HHS agreed with our recommendation.

GAO (1) assessed the progress being made by the Department of Health and Human Services (HHS) since 2005 to develop a national health IT strategy and (2) provided an overview of selected federal agencies' health IT initiatives related to the national health IT strategy.

What GAO Found

HHS has continued efforts to develop a national health IT strategy. For example, HHS—through the Office of the National Coordinator for Health IT—has established the organizational structure of the office and awarded $42 million in contracts intended to advance the use of health IT. These contracts address a range of issues important to encouraging the adoption of IT such as reviewing standards activities for gaps and duplication (see table). In addition, HHS has established the American Health Information Community to obtain public and private sector input on how to make health records digital and achieve interoperability for health information exchange. HHS intends to use the results of the contracts and the Community proceedings to define future direction. Key HHS divisions also continue funding and supporting the development of health IT initiatives that support the goals of the framework. According to the National Coordinator, he intends to release a strategic plan with detailed plans and milestones later this year.

Health IT Contracts Awarded by HHS's Office of the National Coordinator

Contract	Date Awarded	Duration	Cost	Description
Standards Harmonization Process	September 2005	1 year	$3.2 million	To develop and test a process for identifying, assessing, endorsing, and maintaining a set of standards required for interoperable health information exchange.
Compliance Certification Process	September 2005	1 year	$2.7 million	To develop and evaluate a compliance certification process for health IT, including the infrastructure components through which these systems interoperate.
Privacy and Security	September 2005	1½ years	$11.5 million	To assess and develop plans to address variations in organization-level business policies and state laws that affect privacy and security practices, which may pose challenges to health information exchange.
National Health Information Network Prototypes	November 2005	1 year	$18.6 million; 4 contracts	To develop and evaluate prototypes for a nationwide health information network architecture for widespread health information exchange.

Several federal agencies collaborating with HHS—namely, the Departments of Veterans Affairs, Defense, and Commerce, and the Office of Personnel Management— also have responsibility for their own health IT initiatives related to the national health IT strategy. These agencies participate in the American Health Information Community. Veterans Affairs and Defense play critical roles in the advancement of electronic health records, which they have developed and are implementing in their facilities. The Office of Personnel Management is attempting to use its position as one of the largest purchaser of employee health care benefits by encouraging its carriers to use applications such as enabling a physician to transmit a prescription electronically to a patient's pharmacy of choice. The National Institute for Standards and Technology is also providing technical expertise in the standards development and harmonization process and established a Web site to assist in standards development efforts.

Mr. Chairman and Members of the Committee:

I am pleased to be here today to comment on federal efforts to advance the use of information technology (IT) for health care delivery and public health. As we and others have reported, the use of IT has enormous potential to improve the quality of health care and is critical to improving the performance of the U.S. health care system. The federal government has been working to promote the use of IT in public and private health care settings. With the growing momentum behind a national health IT strategy, leveraging federal efforts is an important component of this strategy. Several federal agencies are collaborating with the Department of Health and Human Services (HHS)—namely, the Departments of Veterans Affairs, Defense, and Commerce, and the Office of Personnel Management—as it works toward developing a national strategy to advance the use of health IT.

At your request, today we will (1) discuss our assessment of the progress being made since 2005 by HHS's Office of the National Coordinator for Health IT and other key divisions toward the development of a national IT strategy and (2) provide an overview of selected federal agencies' initiatives related to the national health IT strategy. In preparing this statement, we reviewed agency documents that describe the current status of HHS's and other federal agencies' activities related to a health IT strategy and supplemented our analysis with interviews of agency officials. We also summarized our prior reports. Our work was performed in accordance with generally accepted auditing standards.

Results in Brief

HHS—through the Office of the National Coordinator for Health IT—has continued efforts to define a national health IT strategy. HHS has established the organizational structure of the Office of the National Coordinator and awarded about $42 million in contracts intended to advance the adoption of health IT. These contracts address a range of issues important in advancing the use of IT, such as reviewing standards activities for gaps and duplication and reviewing privacy and security laws across federal and state

governments. In addition, the Secretary of HHS has established an advisory body called the American Health Information Community to obtain public and private sector input. The Community, composed of representatives from federal agencies and the private sector, began meeting in October 2005 to advise HHS on how to make health records digital and achieve interoperability for health information exchange. HHS plans to use the results of the contracts and the Community proceedings to define future direction. HHS also has other important health IT programs and initiatives, such as the demonstration grants awarded by the Agency for Healthcare Research and Quality and the Centers for Disease Control and Prevention's Public Health Information Network. These initiatives are intended to address a variety of issues to accelerate and encourage the adoption of health IT across the health care industry and support the goals of the framework for strategic action. According to the National Coordinator, he intends to release a strategic plan later this year that will guide the nationwide implementation of interoperable health IT by establishing milestones and performance metrics.

Several federal agencies collaborating with HHS—namely, the Departments of Veterans Affairs, Defense, and Commerce, and the Office of Personnel Management—also have responsibility for their own initiatives related to the national health IT strategy. Many of these agencies, as well as a representative from the Department of the Treasury, participate in the American Health Information Community, HHS's newly formed Health IT Policy Council, and the Federal Health Architecture.[1] Veterans Affairs and Defense, as major federal health care providers, play critical roles in the advancement of electronic health records (EHR). Veterans Affairs has developed and implemented an EHR system; Defense is still in the process of implementing one in their facilities. The Office of Personnel Management is planning to use its position as one of the

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[1]HHS's Federal Health Architecture program is intended to define a framework and methodology for establishing a target architecture and standards for interoperability and communication. An architecture describes an entity in both logical terms (e.g., interrelated functions, information needs and flows, work locations, systems, and applications) and technical terms (e.g., hardware, software, data, communications, and security).

largest purchasers of employee health care benefits to encourage its carriers to use applications such as electronic prescribing.[2] When the agency issued its 2005 annual call letter to carriers last April, it requested that plans describe their health IT initiatives, including any currently in place for doctors and pharmacies to use electronic prescribing. The National Institute for Standards and Technology is also providing technical expertise, largely in the standards development and harmonization process, and has established a Web site containing information on health care standards, organizations, and resources to assist in standards development, implementation, and use by developers and other stakeholders.

Background

Studies published by the Institute of Medicine and others have indicated that fragmented, disorganized, and inaccessible clinical information adversely affects the quality of health care and compromises patient safety. In addition, long-standing problems with medical errors and inefficiencies increase costs for health care delivery in the United States. With health care spending in 2004 reaching almost $1.9 trillion, or 16 percent of the gross domestic product, concerns about the costs of health care continue. As we reported last year, many policymakers, industry experts, and medical practitioners contend that the U.S. health care system is in crisis.[3]

Health IT—the technology used to collect, store, retrieve, and transfer clinical, administrative, and financial health information electronically—is seen as a promising solution to improve patient safety and reduce inefficiencies. Hence, it has great potential to improve the quality of care, bolster preparedness of our public health infrastructure, and save money on administrative costs. As

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[2]Electronic prescribing enables a physician to transmit a prescription electronically to a patient's pharmacy of choice. It decreases prescription errors caused by hard-to-read handwriting and automates the process of checking for drug interactions and allergies.

[3]GAO, *21st Century Challenges: Reexamining the Base of the Federal Government*, GAO-05-325SP (Washington, DC: February 2005).

we reported in 2003, technologies such as electronic health records[4] and bar coding of certain human drug and biological product labels have been shown to save money and reduce medical errors.[5] For example, a 1,951-bed teaching hospital reported that it realized about $8.6 million in annual savings by replacing paper medical charts with electronic medical records for outpatients. This hospital also reported saving more than $2.8 million annually by replacing its manual process for handling medical records with electronic access to laboratory results and reports. Health care organizations also reported that IT contributed other benefits, such as shorter hospital stays, faster communication of test results, improved management of chronic diseases, and improved accuracy in capturing charges associated with diagnostic and procedure codes.

However, according to HHS, only a small number of U.S. health care providers have fully adopted health IT as there are significant financial, technical, cultural, and legal barriers to its adoption. These include a lack of access to capital, a lack of data standards, and resistance from health care providers.

Federal Government's Role in Health Care

According to the Institute of Medicine, the federal government has a central role in shaping nearly all aspects of the health care sector as a regulator, purchaser, health care provider, and sponsor of research, education, and training. Seven major federal health care programs, such as Medicare and Medicaid, provide health care services to approximately 115 million Americans. Table 1 summarizes the number of citizens who receive health care services from the federal government and the cost of these services.

[4]There is a lack of consensus on what constitutes an electronic health record (EHR), and thus multiple definitions and names exist for EHRs, depending on the functions included. An EHR generally includes (1) a longitudinal collection of electronic health information about the health of an individual or the care provided, (2) immediate electronic access to patient- and population-level information by authorized users, (3) decision support to enhance the quality, safety, and efficiency of patient care, and (4) support of efficient processes for health care delivery.

[5]GAO, *Information Technology: Benefits Realized for Selected Health Care Functions*, GAO-04-224 (Washington, D.C.: Oct. 31, 2003).

Table 1: Beneficiaries and Expenditures in Major Federal Health Care Programs for Fiscal Year 2004

Federal Agency	Program	Beneficiaries	Expenditures
HHS	Medicare	42 million elderly and disabled beneficiaries	$309 billion
HHS	Medicaid	43.7 million low-income persons	$276.8 billion (joint federal and state)
HHS	State Children's Health Insurance Program	5.8 million children[a]	$6.6 billion (joint federal and state)
HHS	Indian Health Service	1.8 million Native Americans and Alaska Natives	$3.7 billion
VA	Veterans Health Administration	5 million veterans	$29.1 billion
DOD	Tricare Program	9.2 million active-duty military personnel and their families, and military retirees	$24.4 billion
OPM	Federal Employees Health Benefit Program	8 million federal employees, retirees and dependents	$27 billion

Source: HHS, VA, DOD, and OPM budget documents.

[a] Based on FY 2003 data

Given the federal government's influence in the health care industry, it has been urged to take a leadership role in driving change to improve the quality and effectiveness of medical care in the United States, including the adoption of IT. In April 2004, President Bush called for widespread adoption of interoperable electronic health records within 10 years and issued an executive order[6] that established the position of the National Coordinator for Health Information Technology, who was appointed in May 2004. The National Coordinator is to develop and implement a strategic plan to guide the nationwide implementation of interoperable health IT in both the public and private sectors. Two months later, HHS released *The Decade of Health Information Technology: Delivering Consumer-centric and Information-rich Health Care—Framework for Strategic Action.*

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[6]Executive Order 13335, *Incentives for the Use of Health Information Technology and Establishing the Position of the National Health Information Technology Coordinator* (Washington, D.C.: April 27, 2004).

The framework describes actions to be taken by the public and private sectors to develop and implement a strategy that is built on already-existing work in health IT. The framework defines goals and strategies that are to be implemented in three phases.[7] HHS is in the initial phase of implementing activities of the framework by coordinating federal health IT efforts across the government and reaching out to private industry. The framework also introduced the concept of regional health information organizations, which are considered an essential element in the establishment of a national health information network. Regional health information organizations—entities that enable the exchange and use of health information—are expected to facilitate information exchange across different jurisdictions and hospital systems.

Other federal agencies also play an important role in fostering the adoption of health IT. The Department of Veterans Affairs—one of the country's largest health care providers—has had an automated information system in its medical facilities since 1985. The agency's Veterans' Health Information Systems and Technology Architecture is an integrated outpatient and inpatient system that includes its electronic health record—the Computerized Patient Record System. The Department of Defense has provided IT support to its hospitals and clinics since 1968. The Composite Health Care System (CHCS), deployed in 1993, is the primary medical information system now used in all military health system facilities worldwide. In 1997, the department initiated CHCS II and is in the process of implementing the system in their facilities. Now known as the Armed Forces Health Longitudinal Technology Application, it will eventually replace CHCS. The Office of Personnel Management (OPM) has responsibility for the Federal Employees Health Benefit Program, which is one of the largest employer-based health insurance programs in the country. The government pays on average about 72 percent of the cost of the coverage and enrollees pay the remainder based on a formula set by law.

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[7]These goals address the development of market institutions to lower the risk of health IT procurement (phase I), investment in clinical management tools and capabilities (phase II), and support for the transition of the market to robust quality and performance accountability (phase III).

National Strategy and Greater Interoperability Still Needed

In the summer of 2004, we testified on the benefits that effective implementation of IT can bring to the health care industry and the need for HHS to provide continued leadership, clear direction, and mechanisms to monitor progress in order to bring about measurable improvements.[8] Last year, we reported that HHS, through the Office of the National Coordinator for Health IT, and in conjunction with other federal agencies, had taken a number of actions toward accelerating the use of IT to transform the health care industry, including the issuance of a framework for strategic action as a first step toward defining a national strategy. To accelerate the adoption of interoperable information systems, we recommended that HHS establish detailed plans and milestones for each phase of the framework and take steps to ensure that those plans are followed and milestones are met.[9] The department agreed with our recommendation.

We have also reported on major public health IT initiatives and challenges that still need to be overcome to strengthen the IT that supports the public health infrastructure.[10] Federal agencies face many challenges in improving the public health infrastructure. These challenges include (1) integrating current initiatives into a national health IT strategy and federal architecture to reduce the risk of duplicative efforts, (2) developing and adopting consistent standards to encourage interoperability, (3) coordinating initiatives with states and local agencies to improve the public health infrastructure, and (4) overcoming federal IT management weaknesses to improve progress on IT initiatives. Until these agencies address all these challenges, movement toward building a

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[8]GAO, *Health Care: National Strategy Needed to Accelerate the Implementation of Information Technology*, GAO-04-947T (Washington, D.C.: July 14, 2004).

[9]GAO, *Health Information Technology: HHS Is Taking Steps to Develop a National Strategy*, GAO-05-628 (Washington, D.C.: May 27, 2005).

[10]GAO, *Bioterrorism: Information Technology Strategy Could Strengthen Federal Agencies' Abilities to Respond to Public Health Emergencies*, GAO-03-139 (Washington, D.C.: May 30, 2003); GAO, *Information Technology: Federal Agencies Face Challenges in Implementing Initiatives to Improve Public Health Infrastructure*, GAO-05-308 (Washington, D.C.: June 10, 2005).

stronger public health infrastructure will be limited, as will the ability to share essential information concerning public health emergencies and bioterrorism. We recommended that HHS coordinate with state and local public health agencies, align federal public health initiatives with the national health IT strategy and federal health architecture, and continue federal actions to encourage the development and adoption of data standards.

Last September, we testified before the full committee about the importance of defining and implementing data and communication standards to speed the adoption of interoperable IT in the health care industry.[11] Hurricane Katrina highlighted the need for interoperable electronic health records as thousands of people were separated from their health care providers and paper medical records were lost. As we noted, standards are critical to enabling this interoperability. Although federal leadership has been established to accelerate the use of IT in health care, we testified that several actions[12] are still needed to position HHS to further define and implement relevant standards. Otherwise, the health care industry will continue to be plagued with incompatible systems that are incapable of exchanging key data that are critical to delivering care and responding to public health emergencies.

For the past seven years, the Departments of Defense (DOD) and Veterans Affairs (VA) have been working to achieve the capability of sharing medical information. However, they have been severely challenged in their pursuit of the longer-term objective—providing a virtual medical record in which data are computable.[13] As we have noted, the departments had achieved some success in sharing data through the one-way transfer of health information from DOD to VA

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[11]GAO, *Health Care: Continued Leadership Needed to Define and Implement Information Technology Standards*, GAO-05-1054T (Washington, D.C.: Sept. 29, 2005).

[12] These actions included the lack of mechanisms for better agency coordination of the various standards efforts, incomplete milestones associated with these efforts, and no mechanism to monitor the implementation of standards across the health care industry.

[13]Rather than data being provided as text for viewing only, data would be in a format that the health information application can act on: for example, providing alerts to clinicians of such things as drug allergies and plotting graphs of changes in vital signs such as blood pressure.

health care facilities. [14] According to the departments, the use of such computable medical data contributes significantly to the usefulness of electronic medical records. In the past year, VA and DOD have begun to implement applications that exchange limited electronic medical information between the departments' existing health information systems. The agencies have implemented three recommendations that we made in June 2004, such as developing an architecture for the electronic interface and establishing a lead entity for the project, but they have not developed a clearly defined project management plan and they have experienced delays in exchanging computable patient health data.

HHS Continuing Efforts to Define a National Health Information Technology Strategy

HHS—through the Office of the National Coordinator (ONC) for Health IT—has continued efforts to define a national strategy, building on the framework already established. HHS has established the organizational structure of the Office of the National Coordinator. It has also awarded about $42 million in contracts to address a range of issues important in developing a robust IT infrastructure, such as reviewing IT standards activities for gaps and duplication and reviewing privacy and security laws across federal and state governments. In order to obtain public and private sector input, the Secretary of HHS has established an advisory body called the American Health Information Community (Community). The Community began meeting in October 2005 to advise the Secretary concerning efforts to develop standards and achieve interoperability of health IT. HHS has other important programs and initiatives such

[14]GAO, *Computer-Based Patient Records: VA and DOD Made Progress, but Much Work Remains to Fully Share Medical Information*, GAO-05-1051T (Washington, D.C.: September 28, 2005); GAO, *Computer-Based Patient Records: Improved Planning and Project Management Are Critical to Achieving Two-Way VA–DOD Health Data Exchange*, GAO-04-811T (Washington, D.C.: May 19, 2004); and *Computer-Based Patient Records: Short-Term Progress Made, but Much Work Remains to Achieve a Two-Way Data Exchange Between VA and DOD Health Systems*, GAO-04-271T (Washington, D.C.: Nov. 19, 2003).

as the demonstration grants awarded by the Agency for Healthcare Research and Quality and the Centers for Disease Control and Prevention's Public Health Information Network.

The National Coordinator is Continuing Efforts to Develop a National Health Information Technology Strategy

HHS's Office of the National Coordinator for Health IT (ONC) has continued to move forward with its mission to guide the nationwide implementation of interoperable health IT in the public and private health care sectors. Building on the framework for strategic action, last summer the National Coordinator announced the organizational structure of his office and recently announced the appointment of his management team. ONC is organized as follows:

- Immediate Office of the National Coordinator—provides executive direction to the office and is responsible for carrying out the office's mission and functions.
- Office of Health IT Adoption—works with all other ONC offices to identify health IT strategies, implement plans, and monitor outcomes toward meeting the President's goals.
- Office of Interoperability and Standards—provides leadership in developing and implementing nationwide interoperable health IT infrastructure and standards to support the secure and seamless exchange of health information.
- Office of Programs and Coordination—ensures the integration of all efforts across the ONC and supports the dissemination and adoption of the federal government's policy on health IT.
- Office of Policy and Research—conducts studies in support of ongoing health IT and coordinates efforts that inform policy decisions related to health IT.

Since our May 2005 report, HHS has also awarded a series of contracts that address the development of the infrastructure needed to support a national health information network. These contracts, outlined in table 2, total about $42 million.

Table 2: Health IT Contracts Awarded by HHS's Office of the National Coordinator

Contract	Date Awarded	Duration	Cost	Description
American Health Information Community Program Support	September 2005	1 year	$0.8 million	To provide assistance to the National Coordinator in convening and managing the meetings and activities of the Community to ensure that the health IT plan is seamlessly coordinated.
Standards Harmonization Process for Health IT	September 2005	1 year	$3.2 million	To develop and test a process for identifying, assessing, endorsing, and maintaining a set of standards required for interoperable health information exchange.
Compliance Certification Process for Health IT	September 2005	1 year	$2.7 million	To develop and evaluate a compliance certification process for health IT, including the infrastructure components through which these systems interoperate.
Privacy and Security [a]	September 2005	1½ years	$11.5 million	To assess and develop plans to address variations in organization-level business policies and state laws that affect privacy and security practices, including those related to HIPAA, which may pose challenges to interoperable health information exchange.
National Health Information Network Prototypes	November 2005	1 year	$18.6 million (4 contracts)	To develop and evaluate prototypes for a nationwide health information network architecture that maximize the use of existing resources such as the Internet to achieve widespread interoperability among software applications, particularly electronic health records. These contracts are also intended to spur technical innovation for nationwide electronic sharing of health information in patient care and public health settings.
Measuring the Adoption of Electronic Health Records	September 2005	2 years	$1.8 million	To develop a methodology to better characterize and measure the state of electronic health records adoption and determine the effectiveness of policies aimed at accelerating adoption of electronic health records and interoperability.
Gulf Coast Electronic Digital Health Recovery	September 2005	1 year	$3.7 million	To plan and promote the widespread use of electronic health records in the Gulf Coast regions affected by recent hurricanes. These agreements are expected to bring together local and national resources, coordinate the planning for a digital health information recovery, and develop a prototype of health information sharing and electronic health record support that can be replicated throughout the region.

Source: HHS Office of the National Coordinator for Health Information Technology

[a] Jointly managed by the Agency for Healthcare Research and Quality and the Office of the National Coordinator.

As part of HHS's plans to include private sector involvement, the Secretary of HHS established the American Health Information Community, a public-private collaboration to advise HHS on how to make health records digital and achieve interoperability for health information exchange. The Community will also provide a forum for public and private interests to recommend specific actions that will accelerate the widespread application and adoption of electronic health records and other health IT applications. Chartered for two

years, with the option to renew for no more than five years, HHS intends for the Community to be succeeded by a private sector health information initiative. (The first meeting of the Community was held in October 2005). To date, it has identified several potential breakthrough areas[15] and established four priority areas—consumer empowerment, biosurveillance, electronic health records, and chronic care management. Workgroups are in the process of being established, each with a specific charge to be accomplished within one year (e.g., deploy a widely available pre-populated medication history linked to the registration summary). Milestones have been established to present findings and recommendations to the Community on a quarterly basis.

HHS intends to use the results of its contracts and the Community workgroups to define future direction. The National Coordinator's office intends to release a strategic plan later this year now that his management team is in place. This plan is expected to guide the nationwide implementation of interoperable health IT by providing detailed plans and milestones, as we had recommended.

Other HHS Divisions Contribute to the Department's Efforts on the National Health Information Technology Strategy

As we have previously reported, the role of the National Coordinator includes the coordination of programs and policies regarding health IT across HHS. Building on ongoing agency initiatives—health IT demonstration grants, the Federal Health Architecture, and the Public Health Information Network[16]—these activities address a variety of issues important to accelerating and encouraging the adoption of health IT across the health care industry. Key HHS divisions, such as the Centers for Medicare and Medicaid and the Agency for Healthcare Research and Quality, continue funding and supporting the development of health IT initiatives that support the

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[15]Breakthrough areas are projects that can potentially achieve measurable results in two to three years.

[16]The Public Health Information Network is a national initiative intended to integrate and coordinate existing systems by serving as a comprehensive architecture, information exchange network, and a set of services that will integrate existing capabilities and advance the ways in which IT can support public health.

goals of the framework for strategic action. The National Coordinator also plans to form an HHS health IT committee for improving coordination within the agency. Examples of health IT initiatives associated with the framework, some that we have previously reported on, include:

- The Centers for Medicare and Medicaid Services (CMS), in conjunction with VA, released a test version of VistA-Office EHR for evaluation by a limited number of physician's practices. This system is targeted for use in clinics and small physician offices and will be subject to the same certification requirements as private sector products. CMS is continuing with the Doctor's Office Quality Information Technology initiative, a two-year demonstration designed to improve quality of care and patient safety services provided to Medicare beneficiaries by promoting the adoption of electronic health records in primary care physician offices. Quality measures developed by the program will be reported by participating practices to the Quality Improvement Organization Clinical Warehouse. The warehouse will review and validate electronically transmitted information regarding physician performance and identify opportunities for improvement. CMS also awarded $6 million for electronic prescribing pilot programs.
- The Agency for Healthcare Research and Quality is continuing its support of demonstration and developmental projects to better understand the connection between improved care and health IT. It awarded more than $22.3 million in grant funds for the implementation of 16 health IT demonstration projects in October 2005. In addition, the agency created the National Resource Center for Health IT to provide technical assistance and share new knowledge and findings from the real-world experiences of its grantees.
- The Health Resources and Services Administration formed the Office of Health IT in December 2005 to promote the adoption and effective use of IT for improving the delivery of care in the

safety net community.[17] It is also continuing its work with federal community health centers to implement ambulatory electronic health records, including the development of initial performance measures to demonstrate the cost benefits of health IT. In addition, the Health Resources and Services Administration has provided funds for telehealth and other health IT projects through its Office for the Advancement of Telehealth.

- The National Institutes of Health is continuing its efforts to achieve interoperability as part of its standards development initiative (i.e., Systemized Nomenclature of Medicine-Clinical Terms) and development of a virtual infrastructure to allow research centers to pool data, such as the Cancer Biomedical Informatics Grid and the Rare Disease Clinical Research Network. It plans to host a joint meeting with the Agency for Healthcare Research and Quality in May 2006 to look at how a national health information network can support clinical studies and trials.

- The Centers for Disease Control and Prevention is continuing work on the information systems that support the Public Health Information Network. For example, data collection for BioSense is being expanded to include emergency room data at selected cities and plans for the National Electronic Disease Surveillance System call for it to move to a Web-based data entry system.

Other Federal Agencies Have Initiatives Related to the National Health Information Technology Strategy

Several federal agencies collaborating with HHS —namely the Departments of Veterans Affairs, Defense, and Commerce, as well as the Office of Personnel Management— also have responsibility for their own health IT initiatives related to the national health IT strategy. Many of these agencies, as well as a representative from the Department of the Treasury, participate in the American Health Information Community, HHS's newly formed Health IT Policy

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[17]The safety net community is made up of providers that by mandate or mission organize and deliver a significant level of health care and other health-related services to the uninsured, Medicaid, and other vulnerable patients.

Council, and the Federal Health Architecture. In 2004, the Office of the National Coordinator for Health IT was assigned responsibility for the Federal Health Architecture. According to the National Coordinator, he is planning to renew the Federal Health Architecture workgroups this spring in order to improve coordination and collaboration on federal health IT. In addition to the Departments of Defense, Veterans Affairs, and Commerce, other federal agencies involved with the Federal Health Architecture include the Departments of Agriculture, Homeland Security, Justice, and the Environmental Protection Agency.

As major federal health care providers, the Departments of Defense and Veterans Affairs play critical roles in the advancement of electronic health records. The experience of these agencies in implementing electronic health records and in health information exchange across organizational boundaries offer important lessons learned—both positive and negative—that could be applied as health care delivery organizations adopt electronic health record systems. According to HHS, the Department of Defense has a lengthy history working in remote and medically underserved areas and has experience in using IT, such as telehealth, to deliver care in isolated areas that can be compared to the conditions in some rural environments.

According to the Office of Personnel Management, it is planning to use its position as one of the largest purchasers of employee health care benefits to contribute to the expansion and use of electronic health records, electronic prescribing, and other health IT-related provisions. The agency is represented on the American Health Information Community and, according to agency officials, has been holding informal discussions with staff from the Office of the National Coordinator. In July 2004, the Office of Personnel Management outlined various options for health plans in the Federal Employee Health Benefit program, such as adopting systems based on generally accepted and certified standards. When the agency issued its 2005 annual call letter[18] to carriers last April, it requested

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[18]Call letters provide guidance for benefit and rate proposals from FEHB program plans for the next contract term.

that plans describe their health IT initiatives, including any currently in place for doctors and pharmacies to use electronic prescribing. According to an agency official, it received responses from participating health plans and reviewed them to establish a baseline with the intention of measuring progress on the use of health IT.

The National Institute for Standards and Technology (NIST) is also collaborating with HHS, largely by supporting the Office of the National Coordinator and its contractors with technical expertise. Initially, its support had been focused on the standards development and harmonization process. NIST supports a Website—the Health Care Standards Landscape—to address the need for a Web-based repository of information on health care standards, organizations, and resources that can assist in standards development, coordination, implementation, adoption, and use by system developers and other stakeholders.[19] In addition, NIST is expected to leverage its technical resources by assisting HHS with the national health information network architecture and the certification process for health IT.

In summary, HHS's efforts to transform the use of IT in the health care industry are continuing although much work remains. As we recommended last May, HHS still needs to establish detailed plans and milestones as part of the national strategy and take steps to ensure that those plans are followed and milestones are met. The National Coordinator plans to release a strategic plan later this year that establishes milestones. Given the billions of dollars the federal government spends annually towards health care and the potential of IT to save money and improve quality, it is important that coordination continue across the federal government and that federal resources are leveraged appropriately.

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[19] The Website is http://hcsl.sdct.nist.gov.

Contacts and Acknowledgements

If you should have any questions about this statement, please contact me at (202) 512-9286 or by e-mail at pownerd@gao.gov. Other individuals who made key contributions to this statement are M. Yvonne Sanchez, Nancy E. Glover, and Teresa F. Tucker.