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Perspective

Launching HITECH

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Information is the lifeblood of modern medicine. Health information technology (HIT) is destined to be its circulatory system. Without that system, neither individual physicians nor health care insti-

tutions can perform at their best or deliver the highest-quality care, any more than an Olympian could excel with a failing heart. Yet the proportion of U.S. health care professionals and hospitals that have begun the transition to electronic health information systems is remarkably small.^{1,2}

On December 30, the government took several critical steps toward a nationwide, interoperable, private, and secure electronic health information system. The Department of Health and Human Services (DHHS) released two proposed regulations affecting HIT (www.federalregister.gov/inspection.aspx#special). The first, a notice of proposed rule-making (NPRM), describes how hospitals,

physicians, and other health care professionals can qualify for billions of dollars of extra Medicare and Medicaid payments through the meaningful use of electronic health records (EHRs). The second, an interim final regulation, describes the standards and certification criteria that those EHRs must meet for their users to collect the payments. In addition, between August and December 2009, my office — the DHHS Office of the National Coordinator for Health Information Technology (ONC) — announced nearly \$2 billion worth of new programs to help providers become meaningful users of EHRs and to lay the groundwork for an advanced electronic health informa-

tion system. All these actions were authorized by the Health Information Technology for Economic and Clinical Health (HITECH) Act, which was part of the American Recovery and Reinvestment Act of 2009, also known as the stimulus bill (see table).³

The provisions of the HITECH Act are best understood not as investments in technology per se but as efforts to improve the health of Americans and the performance of their health care system. The installation of EHRs is an important first step. But EHRs will accomplish little unless providers use them to their full potential; unless health data can flow freely, privately, and securely to the places where they are needed; and unless HIT becomes increasingly capable and easy to use.

Understanding this, Congress and the Obama administration structured the HITECH Act so

New Regulations and Programs Created by the HITECH Act.		
New Regulations	Description	
Notices of proposed rule-making (NPRM)		
Meaningful use (issued)	Criteria established for Medicare- and Medicaid-participating providers and hospitals to receive incentives for using electronic health records (EHRs) in a meaningful manner, which includes electronically capturing health information in a coded format, using that information to track key clinical conditions, communicating that information in order to help coordinate care, and initiating the reporting of clinical quality measures and public health information.	
Certification (forthcoming)	A defined process of ensuring the functionality, security, and interoperability of EHRs that meet the standards and certification criteria required to achieve meaningful use of those records. Providers must use certified EHRs to qualify as meaningful users.	
Interim final regulation for certification criteria and standards (issued)	An initial set of standards, implementation specifications, and certification criteria for EHRs.	
New Programs	Description	Funds Allocated*
Regional extension centers (RECs)	Establish up to 70 RECs to support providers in adopting and becoming meaningful users of health information technology (HIT).	\$643 Million
Health information exchange	Support state programs to ensure the development of health information exchange within and across their jurisdictions.	\$564 Million
Workforce training programs	Create several distinct programs that aim to support the education of HIT professionals, including curriculum development, competency examinations, and training. The goal is to train up to 45,000 new HIT workers to assist providers in becoming meaningful users of EHRs.	\$118 Million
Beacon communities	Provide funding to create up to 15 demonstration communities in which clinicians, hospitals, and consumers show how the meaningful use of EHRs can achieve measurable improvement in the quality and efficiency of health services or public health outcomes in a given geographic area.	\$235 Million
Strategic health information technology advanced research projects (SHARP)	Fund research focused on achieving breakthrough advances to address well-documented problems that have impeded adoption of HIT, including: the security of HIT, patient-centered cognitive support, health care application and network-platform architectures, and secondary use of EHR data.	\$60 Million
Nationwide Health Information Network (NHIN)	Create a common platform for health information exchange across diverse entities, within communities, and across the country to promote a more effective marketplace, greater competition, and increased choice through accessibility to accurate information on health care costs, quality, and outcomes.	\$64.3 Million
Standards and certification	Develop interoperability specifications that identify harmonized standards and provide detailed technical specifications for how those standards need to be used; work with health care organizations and standards-development organizations to ensure that standards are available for use nationally.	

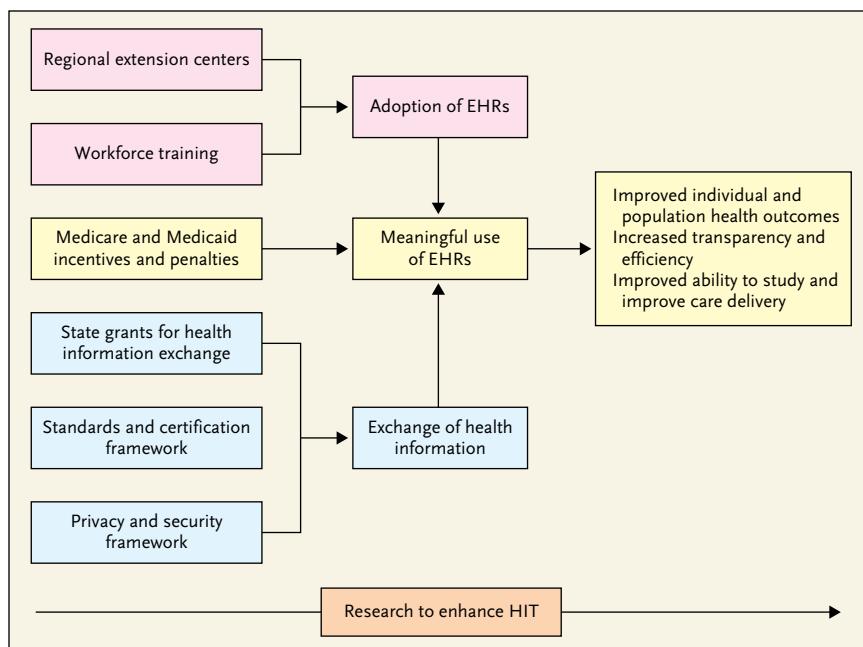
* Since only selected programs are listed, the funds allocated do not total \$2 billion.

as to reward the meaningful use of qualified, certified EHRs — an innovative and powerful concept. By focusing on the effec-

tive use of EHRs with certain capabilities, the HITECH Act makes clear that the adoption of records is not a sufficient pur-

pose: it is the use of EHRs to achieve health and efficiency goals that matters.

The effort to achieve mean-



The HITECH Act's Framework for Meaningful Use of Electronic Health Records (EHRs).

The HITECH Act program focuses on attaining meaningful use of EHRs as a pathway toward improved health system performance. The attainment of meaningful use depends, in turn, on adoption of EHRs and the development of security and private pathways for exchanging health information. Adoption and exchange will be supported by a variety of HITECH Act initiatives.

ingful use provides the best lens through which to understand the government's actions in implementing the HITECH Act. The administration is trying to do four basic things: define meaningful use, encourage and support the attainment of meaningful use through incentives and grant programs, bolster public trust in electronic information systems by ensuring their privacy and security, and foster continued HIT innovation.

The publication on December 30 of an NPRM on Medicare and Medicaid's EHR Incentive Program (www.federalregister.gov/inspection.aspx#special) is part of defining meaningful use. Though both federal rule making and the regulation's content are complex, there are a few useful general points to be made.

First, the NPRM is a propos-

al, not a final regulation, and further public comment is invited for a period of 60 days. This invitation is far from pro forma: the DHHS firmly believes that insights from physicians, hospitals, consumers, payers, and other health care stakeholders can improve this rule.

Second, the DHHS believes that the proposed requirements would be challenging yet attainable, especially with assistance provided through other HITECH Act programs. What is more, achieving meaningful use would advance Americans' health. The DHHS defined meaningful use carefully so as to further five health care goals: improving the quality, safety, and efficiency of care while reducing disparities; engaging patients and families in their care; promoting public and population health; improv-

ing care coordination; and promoting the privacy and security of EHRs.

Third, Congress instructed the secretary of health and human services to make the requirements for meaningful use more demanding over time. The current NPRM defines only stage 1, which focuses on collecting critical data elements in electronic form, sharing key information with other providers and with patients, and reporting quality measures to the government. The proposed evolution of meaningful use in stages 2 and 3 would emphasize rewarding providers for using EHRs to improve processes of care and outcomes, respectively.

Defining meaningful use is a first step toward its accomplishment, but other elements must also fall into place. Multiple studies have shown that health care providers need help overcoming several key obstacles to adopting and using HIT. Many lack the financial resources to purchase, implement, and maintain EHRs. They also lack the technical expertise to pick the right HIT systems and use them in ways that will improve care. And no infrastructure exists in most areas of the country for secure health information exchange among providers and between providers and consumers.

The various HITECH Act programs and regulations address these obstacles (see flow chart). To help overcome financial obstacles, eligible health care professionals can generally earn up to \$44,000 in extra payments between 2011 and 2015 if they become meaningful users of EHRs (Medicaid providers can generally earn as much as \$63,750 between

2011 and 2021). Hospitals that are meaningful users can collect an initial bonus and an extra payment per discharge of a Medicare patient. Medicaid has a separate formula for rewarding meaningful use by hospitals.

Several initiatives will help providers choose and implement EHRs. The companion regulation to the NPRM on meaningful use establishes interim standards and criteria that EHRs must meet in order to be “certified.” Together with a certification process, which the DHHS is developing, this regulation will define minimum capabilities for EHRs and help ensure providers that they are purchasing technology that can help them attain meaningful use.

Perhaps even more important to overcoming providers’ technical and logistic problems, the government has committed almost \$650 million under the HITECH Act to the creation of a network of up to 70 Regional Health Information Technology Extension Centers. Focusing initially on primary care providers in small practices, these centers will offer advice on which EHR systems to purchase and then assist physicians and hospitals in becoming meaningful EHR users.

To address the lack of infrastructure for the exchange of health information, the federal government is channeling more than \$560 million in HITECH Act monies to state governments to lead the development of exchange capabilities within and across their jurisdictions. States

are well positioned to do this, and as the custodians of Medicaid and public health data, they are essential exchange participants themselves. Furthermore, the ONC is accelerating ongoing work to create a national infrastructure for health information exchange called the Nationwide Health Information Network. The data standards established under the new regulation will also promote information exchange by facilitating communication among parties sharing health information.

Health information exchange, however, will never reach its potential unless patients and providers are confident that patients’ data are private and secure — both when stored in EHRs or other repositories and when flowing through the health care system. The HITECH Act greatly strengthened existing privacy protections under the Health Insurance Portability and Accountability Act. In addition, the ONC has asked one of its advisory committees to study additional measures for increasing the privacy and security of health information without compromising its availability for such critical purposes as patient care and research.

A last key element of the government’s HIT plans is promoting innovation. In developing regulations, the DHHS has tried assiduously to avoid requirements that would slow innovation in the dynamic HIT sector. Furthermore, the ONC recently announced a \$60 million research

program designed to encourage progress in HIT’s capabilities and usability.

The government’s program for creating a 21st-century health information system is complex, and it will continue to evolve as we learn more about the effects of the HITECH Act’s implementation. One thing is clear, however. It is impossible to imagine a high-performing U.S. health system that does not take full advantage of the computing technology that has transformed virtually every other aspect of human endeavor. The HITECH Act’s programs strive to create an electronic circulatory system for health information that nourishes the practice of medicine, research, and public health, making health care professionals better at what they do and the American people healthier. The input, support, and patience of both providers and the public are essential to our success.

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