Stimulating the Adoption of Health Information Technology

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The recently enacted stimulus bill — the American Recovery and Reinvestment Act of 2009 (ARRA) — touches almost every aspect of the U.S. economy. Health care is no exception. In fact, the ARRA is historic health care legislation of the type rarely produced by our famously incremental federal government. The law prevents dramatic state cuts in Medicaid, expands funding for preventive health care services and health care research, and helps the unemployed buy health insurance. But perhaps its most profound effect on doctors and patients will result from its unprecedented $19 billion program to promote the adoption and use of health information technology (HIT) and especially electronic health records (EHRs).

The HIT components of the stimulus package — collectively labeled HITECH in the law — reflect a shared conviction among the fledgling Obama administration, the Congress, and many health care experts that electronic information systems are essential to improving the health and health care of Americans. However, proponents of HIT expansion face substantial problems. Few U.S. doctors or hospitals — perhaps 17% and 10%, respectively — have even basic EHRs, and there are significant barriers to their adoption and use: their substantial cost, the perceived lack of financial return from investing in them, the technical and logistic challenges involved in installing, maintaining, and updating them, and consumers' and physicians' concerns about the privacy and security of electronic health information. HITECH addresses these obstacles head on, but huge challenges await efforts to implement the law and fulfill President Barack Obama's promise that every American will have the benefit of an EHR by 2014.

One of HITECH's most important features is its clarity of purpose. Congress apparently sees HIT — computers, software, Internet connection, telemedicine — not as an end in itself but as a means of improving the quality of health care, the health of populations, and the efficiency of health care systems. Under the pressure to show results, it will be tempting to measure HITECH's payoff from the $787 billion stimulus package in narrow terms — for example, the numbers of computers newly deployed in doctors' offices and hospital nursing stations. But that does not seem to be Congress's intent. It wants improvements in health and health care through the use of HIT.

To achieve this goal, the law takes several approaches. It starts by creating a leadership structure to guide federal HIT policy: the Office of the National Coordinator of Health Information Technology (ONCHIT) within the Department of Health and Human Services (DHHS). ONCHIT currently exists under executive authority, but HITECH enshrines it in statute and greatly expands its resources. One of the national coordinator's first responsibilities will be to create a strategic plan for a nationwide interoperable health information system, a plan that must be updated annually. Two statutory committees will advise the coordinator: a Health Information Policy Committee and a Health Information Standards Committee.

From the standpoint of physicians, the legislation's most important provision may be $17 billion in financial incentives intended to get doctors and hospitals to adopt and use EHRs. Starting in 2011, physicians can receive extra Medicare payments for the "meaningful use" of a "certified" EHR that can exchange data with other parts of the health care system. These payments can total as much as $18,000 in the first year in the case of physicians who adopt in 2011 or 2012, with at least $15,000 for physicians who adopt in 2013 and a slightly lower amount for those who do so in 2014; incentives are gradually reduced and then ended in 2016. Thus, physicians demonstrating meaningful use starting in 2011 could collect $44,000 over 5 years. Waiting until 2013 would result in a maximum bonus of $27,000 over 3 years. Experts estimate the cost of purchasing, installing, and implementing an electronic-records system in a medical office at about $40,000.

For physicians with high volumes of Medicaid patients (30% or higher), the law provides subsidies through the Medicaid program as well. Doctors must choose whether to participate in the Medicaid or Medicare bonus program — they cannot receive awards from both. Hospitals participating in Medicare also stand to benefit. Meaningful use of EHRs in 2011 will earn hospitals a one-time bonus payment of $2 million plus an add-on to the Medicare fee based on the diagnosis-related group (DRG). The add-on, which would phase out over a 4-year period, would apply to every admission up to a (yet-to-be-designated) maximum amount. Children's hospitals and other hospitals with a high volume of Medicaid patients can participate in a Medicaid incentive program instead.

HITECH also threatens financial penalties to spur adoption. Physicians who are not using EHRs meaningfully by 2015 will lose 1% of their Medicare fees, then 2% in 2016, and 3% in 2017. Hospitals, too, face penalties for nonadoption as of 2015 — in their case, taking the form of cuts in their annual updates under the DRG system.

Spurring the adoption of EHRs and other HIT will probably require more than financial carrots and sticks. Many physicians and hospitals will need technical help to keep their systems working and to update them as technology improves. HITECH provides $2 billion for ONCHIT to begin putting such support systems in place and authorizes a variety of tools for building the requisite infrastructure. It sets aside $300 million to support the development of health information exchange capabilities at the regional and state levels. The law also authorizes grants to create regional technology extension centers to help providers install EHRs, funds to train a workforce to assist with HIT implementation, educational programs for medical students, and grants and loans to states to assist with adoption and interoperability.

Mindful of concerns about privacy and the security of electronic-records systems, HITECH strengthens protections of health care information as well. It extends the privacy and security regulations of the Health Insurance Portability and Accountability Act to health information vendors not previously covered by the law, including businesses such as Google and Microsoft, when they partner with health care providers to create personal health records for patients. It requires health care organizations to promptly notify patients when personal health data have been compromised, and it limits the commercial use of such information.

All this constitutes a substantial down payment on the financial and human resources needed to wire the U.S. health care system. Still, major hurdles remain. First, the DHHS and ONCHIT are operating on a very tight schedule. The infrastructure to support HIT adoption should be in place well before 2011 if physicians and hospitals are to be prepared to benefit from the most generous Medicare and Medicaid bonuses. Meeting this deadline will be challenging. It takes time to develop and implement innovative federal programs, and it will take even more time to create the local institutions needed to support HIT implementation.

Second, much will depend on the federal government's skill in defining two critical terms: "certified EHR" and "meaningful use." ONCHIT currently contracts with a private organization, the Certification Commission for Health Information Technology, to certify EHRs as having the basic capabilities the federal government believes they need. But many certified EHRs are neither user-friendly nor designed to meet HITECH's ambitious goal of improving quality and efficiency in the health care system. Tightening the certification process is a critical early challenge for ONCHIT. Similarly, if EHRs are to catalyze quality improvement and cost control, physicians and hospitals will have to use them effectively. That means taking advantage of embedded clinical decision supports that help physicians take better care of their patients. By tying Medicare and Medicaid financial incentives to "meaningful use," Congress has given the administration an important tool for motivating providers to take full advantage of EHRs, but if the requirements are set too high, many physicians and hospitals may rebel — petitioning Congress to change the law or just resigning themselves to forgoing incentives and accepting penalties. Finally, realizing the full potential of HIT depends in no small measure on changing the health care system's overall payment incentives so that providers benefit from improving the quality and efficiency of the services they provide. Only then will they be motivated to take full advantage of the power of EHRs.

The nation's economic woes have given birth to an unprecedented federal effort to modernize the information systems of a troubled health care system. It is now up to the government and the nation's health care professionals and facilities to turn this opportunity into real improvements in the health and health care of Americans.

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