The US Office of the National Coordinator for Health Information Technology: Progress and Promise for the Future at the 10-Year Mark

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In April 2004, President Bush signed Executive Order 13335, which called for the establishment of the Office of the National Coordinator for Health Information Technology (ONC) within the US Department of Health and Human Services. The President charged ONC with the critical responsibility of ensuring that every American had access to his or her electronic health information and establishing connectivity of health information technology. [Ann Emerg Med. 2015;66:507-510.]

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Last year, ONC marked 10 years of service to the country. In this past decade, significant progress has been made in building the foundation of a health information technology infrastructure; digitizing the content of the health care experience; catalyzing the development of interoperability infrastructure, new standards and technology, and privacy and security policy; and engaging consumers in the health information technology movement.

This foundation was significantly accelerated by passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act in 2009 as part of the American Recovery and Reinvestment Act. The HITECH Act codified ONC in statute, building on its existing work and providing funding to rapidly advance health information technology in the country, and gave the office a set of authorities and responsibilities to carry out its mission.[1]

Funding was designed with several key goals in mind.[2] First, promote the adoption and "meaningful use" of health information technology in the clinical environment, with the goal of digitizing the majority of the care experience in the nation to improve care. ONC has worked closely with the Centers for Medicare & Medicaid Services on the Medicare and Medicaid Electronic Health Records Incentive Programs (also known as the Meaningful Use program) to provide incentive payments to eligible professionals and hospitals, and critical access hospitals to offset their costs as they adopt, implement, upgrade, or demonstrate the meaningful use of certified electronic health record technology. The first stage of this program has been recognized as successful and has contributed to a strong health information technology foundation nationwide. With 95% of eligible professionals and 96% of eligible hospitals having registered in the program to date,[3] we are at a tipping point as a nation and are empowered by the health information that has been captured during the 5 years since the American Recovery and Reinvestment Act was enacted.

As a result of HITECH, ONC created the Standards and Interoperability Framework, a platform for collaboration among standards and technology developers across the nation, which helps advance technology standards for electronic health records, data transport, privacy options, and electronic clinical quality measurement. The results of this work support the exchange of health information across the continuum and allow the health information technology community to continue to improve the quality of the data shared to see that it is valuable and useful

in the clinical environment and beyond. As called for in HITECH, we also established the Office of the Chief Privacy Officer. This office's key responsibilities are to ensure that patient's rights to data sharing and privacy are met as the country advances the electronic health information infrastructure through better policy and education.

The American Recovery and Reinvestment Act funding also supported the establishment of the infrastructure for health information exchange and interoperability for every state. In some cases, it has advanced preexisting efforts, and in other states it planted the first seeds of such an infrastructure. Grant funding also supported the development of a new workforce for health information technology implementation on the front lines, including training and curriculum development. Through the Beacon Community Program, 17 communities across the country demonstrated how previous health system competitors could collaborate in regard to health information technology and data to improve health and health care quality for populations.

One Beacon site, San Diego Health Connect, has transformed the exchange experience for emergency medicine through the development of an emergency medical services (EMS) hub. Using wireless technology, the hub transmits out-of-hospital data from EMS vehicles en route to the hospital. Because emergency departments (EDs) receive this health information—such as ECGs—from EMS before the patient arrives, ED staff are able to appropriately prepare resources and reduce time to treatment. The EMS hub receives electronic patient care reports from EMS agencies and converts the data into an HL7 format for hospitals to view or import into their ED system. ED staff view out-of-hospital reports through the hub's Web portal or print the reports in PDF format.[4]

As anticipated, the work of the American Recovery and Reinvestment Act era is waning, and ONC is looking ahead at the next 10 years of health information technology. The work of the past decade has meant that we have the opportunity to learn from our work, refocus our priorities, and consider the opportunities in the new technology and health care market place. Of considerable importance is improving usability at the practice level, allowing all providers to more easily realize the benefits and convenience of an electronic health record. This is happening not just through enhanced interoperability but also through continued work at ONC intended to spur vendor innovation through an open application program interface approach, the use of open standards, and interfaces as outlined in the JASON Task Force report

A Robust Health Data Infrastructure.[5] It is an exciting pivot. With a strong national health information technology infrastructure and data capture, we have an opportunity to realize the value of health information technology.

Deliberate internal reflection and an environmental scan show clearly that the next chapter of health information technology is one in which we will improve health and health care by using health information technology tools beyond electronic health records and levers in the public and private sector beyond grants and the Meaningful Use program. The Meaningful Use program, although successful, has not been without its challenges. Stage 1 was broadly attainable for eligible providers and hospitals. Enhanced measures meant to drive use and integration of health information exchange services under stage 2 has been more challenging for providers and hospitals, and we continue to fine tune these measures. Overall, Meaningful Use has been important for a rapidly developing marketplace that will continue to require a coordinated federal government, strong partnership with the private sector, and a flexible regulatory environment that will support the policy goal of everyone benefiting from health information technology and opportunities for innovation. At all times, the people of this country and their improved health are our primary concern.

To ready itself for this future, ONC has undertaken an internal organizational realignment to ensure that it can meet the needs of a future in which (1) electronic health information is appropriately shared because the system is interoperable at the policy and technology level; (2) health information technology makes care more efficient, effective, and safer; (3) health information technology is more usable for clinicians and consumers; (4) data, with appropriate permission, is used by innovators, scientists, clinicians, public health institutions, and others to advance care and health for everyone in this nation. We have also been working with our federal advisory committees to reset priorities for ONC and the nation so they are strategically advising us on a health information technology future that extends beyond the work of HITECH.

Much of our work at ONC and, we expect, in the nation will manifest itself in a focus on the interoperability of health information technology such that data collected can be shared and used to realize real return on the investment. In January 2015, ONC released "Connecting Health and Care for the Nation—A Shared Nationwide Interoperability Roadmap." This draft proposes critical actions that the public and private sector need to take to advance the country toward an interoperable health