

Advancing Health Information Technology to Improve Health and Care: A Conversation with Karen DeSalvo, M.D., National Coordinator for Health Information Technology and Acting Assistant Secretary for Health, U.S. Department of Health and Human Services

Information is the lifeblood of medicine and improving the availability and usage of health care information is foundational for enhancing the modern health care systems' efficiency and effectiveness.

Health information technology, or health IT, allows individuals and health care providers to electronically collect, share and use health information. The term health IT includes a wide range of products, technologies, and services.

At the turn of the 21st century, adoption of one of these tools, the electronic health record by physicians and hospitals, was just beginning and moving slowly. To accelerate the adoption and use of health IT, Congress passed and President Obama signed into law the HITECH Act as part of the American Recovery and Reinvestment Act of 2009.

Interoperable health information and health IT solutions will lead to a more efficient and effective health system, better clinical decision support, scientific advancement, and a continuous-learning health system.

What is health information technology? How could it transform the practice of health care? What is happening to facilitate the adoption and use of health IT? And what are some of the obstacles to realizing the benefits of using health IT? We explored these questions and so much more with our very special guest, Dr. Karen DeSalvo, National Coordinator for Health Information Technology and Acting Assistant Secretary for Health within the U.S. Department of Health and Human Services. The following is an edited excerpt of our discussion, complemented with additional research. — Michael J. Keegan

On the Mission of the Office of National Coordinator (ONC) for Health Information Technology

The position of National Coordinator for Health Information Technology was created in 2004 by the Bush Administration through executive order as a way to better coordinate the country's health IT efforts. The office was legislatively mandated in the Health Information Technology for



Economic and Clinical Health Act (HITECH Act) of 2009. The office was given a set of responsibilities and authorities, as well as significant funding, to help catalyze the marketplace and advance the national adoption and use of health IT. ONC is organizationally located within the Office of the Secretary for the U.S. Department of Health and Human Services (HHS), which really puts us at the forefront of the administration's health IT efforts. We are a resource to the entire health system to support this adoption and the promotion of nationwide health information exchange to improve health care. The passage of the HITECH Act has been followed by an intense five years of work. We are now looking forward to the next 10 years.

On Transforming the Office of National Coordinator for Health IT

Over the last year, the office has been undergoing some changes. During the HITECH period, the office administered some \$2 billion in funds, operating much like a grant-making

agency. The office has shifted its focus on being a coordinator and convener, while dealing with regulations, and priority setting. To that end, we needed to have an organization that was able to look inside the federal government, engage key stakeholders, and bring people to the table. We have flattened the organization to make it most effective. The office is very much like a startup group: spirited and enthusiastic. Many staff have come from private sector and want to serve, so there is, I think, a real inclination to work in a matrix fashion and we do things as a team. Our evolution was partially about moving from a heavy grant-making focus to policy-making coordination, which complements our regulatory responsibilities.

On the Responsibilities of the National Coordinator of Health IT

As national coordinator, I lead the team that is responsible for coordinating the nationwide health IT policy and technology-related efforts. We work with various federal agencies to identify federal health IT priorities, sending a clear message to the private sector and the states about important challenges, solutions to things like privacy, security, technology, and exchange standards.

Through our Federal Advisory Committees (FACAs), which include the Health IT Policy Committee and the Health IT Standards Committee, I work with various stakeholders (e.g., private sector, health care systems, and research) to coordinate our health IT efforts nationally. This also involves the development of the Federal Health IT Strategic Plan, which outlines key strategic priorities and identifies critical levers that we use to move forward in realizing our health IT vision. The preliminary draft plan was released for public comment in late 2014.

Over the last few years, I have also had responsibility for areas focusing on improving care delivery. This is an exciting time in health care. We have seen the development of new models of paying for care and the availability of diverse information consumers can use to make better choices and be more engaged in their health and care. The changing models and the proliferation of information have spurred serious innovation in the marketplace to find better ways to deliver care. We're not only getting better care, we are able to expend resources more wisely. Moreover, our work is integral to the efforts of HHS Secretary Sylvia Mathews Burwell to achieve health care delivery system reform. It's an effort I co-lead with a colleague from the Centers for Medicare and Medicaid Services. We're weaving together what we think are the critical paths to reform by supporting providers as they innovate and improve care and supporting consumers' efforts to get access to better-coordinated care. This also



involves bringing information to bear, not only by increasing transparency about cost and quality using claims data, but also using the clinical data that comes from adoption of health IT in the clinical environment. It's incredibly exciting work, but efforts to achieve care transformation can't happen unless you have information to help inform decisions for clinicians, payers, provider organizations, and communities. And, making sure that this can happen is the work of health IT and the Office of National Coordinator.

On Describing Health Information Technology

The term "health information technology," or health IT, is a broad concept that encompasses an array of technologies and tools to store, share, and analyze health information. More and more health care providers are using health IT to improve patient care. But health IT isn't just for them. You can use health IT to better communicate with your doctor, learn and share information about your health, and take actions that will improve your quality of life. Health IT lets you be a key part of the team that keeps you healthy. It's about putting people at the center of this effort to expand the adoption and use of health IT with such tools as electronic health records (EHRs), personal health records (PHRs), personal health tools (e.g., wearable technology, such as Fitbit and "smart pill" ingestibles), as well as *online communities*. These e-health tools are designed to place you at the center of your care—helping to put the "I" in health IT.

The widespread adoption and use of health IT has as its goals to improve the quality of health care, prevent medical errors, reduce health care costs, increase administrative efficiencies, decrease paperwork, and expand access to affordable

Meaningful Use

Stage 1: Meaningful use criteria focus on:	Stage 2: Meaningful use criteria focus on:	Stage 3: Meaningful use criteria focus on:
Electronically capturing health information in a standardized format	More rigorous health information exchange (HIE)	Improving quality, safety, and efficiency, leading to improved health outcomes
Using that information to track key clinical conditions	Increased requirements for e-prescribing and incorporating lab results	Decision support for national high-priority conditions
Communicating that information for care coordination processes	Electronic transmission of patient care summaries across multiple settings	Patient access to self-management tools
Initiating the reporting of clinical quality measures and public health information	More patient-controlled data	Access to comprehensive patient data through patient-centered HIE
Using information to engage patients and their families in their care		Improving population health

Source: ONCIT

health care. It is imperative that the privacy and security of electronic health information be ensured because this information is maintained and transmitted electronically.

On the Stages of Meaningful Use

Meaningful use was the brainchild of those who crafted the HITECH legislation. It requires that providers show they're using certified EHR technology in ways that can be measured significantly in quality and in quantity. It requires that certified electronic health record (EHR) technology be used to improve quality, safety, and efficiency, and to reduce health disparities. The technology must also foster efforts to engage patients and family; improve care coordination, and population and public health; and maintain privacy and security of patient health information. Ultimately, it is hoped that meaningful use compliance will result in better clinical outcomes, improved population health outcomes, increased transparency and efficiency, empowered individuals, and more robust research data on health systems.

There are three stages of meaningful use, each with its own set of goals, priorities, and its own final rule. Stage one, data capture and sharing, was, in essence, structural and foundational, focusing on data capture and sharing. It was: buy the product, take off the shrink wrap, install it, and show us that you're doing electronic prescribing. Stage two is the stage that we're beginning to see providers and clinicians

attest to now (i.e., how you say "I did the things and I'm signing off on that"), steps up the game significantly. It was designed to move data across the health care ecosystem by using advanced clinical processes. The requirements focus on health information exchange between providers while promoting patient engagement by giving patients secure online access to their health information. Stage three, which will be evolving over the next couple of years, is designed to improve outcomes and to focus on interoperability.

Over the last few years, we have learned from pursuing meaningful use. The program has paid out about \$27 billion to promote and support the meaningful use of electronic health record and health IT. It is major federal program that's had a significant impact on the health care system. We have gone from approximately 15 percent of eligible clinicians, and hospitals using EHRs, to now more than 90 percent of hospitals and more than 60 percent of doctors' offices using EHRs. As part of this effort, we are also providing technical support through grant programs because this effort is not just about technology; it's about people, process, and culture.

On Crafting a Federal Health IT Strategic Plan

Over the past five years, our nation has experienced a remarkable transformation in the collection, sharing, and use of electronic health information. Updating the *Federal Health IT Strategic Plan 2015- 2020* has given us a chance to

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— Dr. Karen DeSalvo



reflect on our health IT journey. While we will continue to work toward more widespread adoption of health IT, efforts will begin to include new sources of information and ways to disseminate knowledge quickly, securely, and efficiently. The first two goals of this plan prioritize increasing the electronic collection and sharing of health information while protecting individual privacy. The final three goals focus on federal efforts to create an environment in which interoperable information is used by health care providers, public health entities, researchers, and individuals to improve health and health care, and to reduce costs.

As I noted, the plan has yet to be finalized and, at the time of our discussion, remains open for public comment. That’s right; we are asking for people to take a look and see whether we’ve set the priorities right. As part of the plan’s development, I engaged in listening sessions to hear from individuals in different organizations outside the Beltway to identify their concerns and priorities. We also pulled together some 36 departments and agencies from across the federal government and agreed upon a vision and mission, a set of goals

and guiding principles, and then a set of strategies. At the end of the day, we focused on health beyond simply health care delivery. We needed to think about health more broadly and about the fact that the ecosystem of health IT had evolved dramatically since our last plan. Every agency wanted to put something on the table. I’m from Louisiana, so it was akin to making gumbo. Everybody had something to contribute.

On Achieving Nationwide Interoperability

Interoperability is the ability of two or more systems to exchange health information and use the information once it is received. It will take time for all types of health IT to be fully interoperable. With the release of *Connecting Health and Care for the Nation: A 10-Year Vision to Achieve an Interoperable Health IT Infrastructure*, we laid out a 10-year plan to develop an interoperable health IT ecosystem.

We identified a set of five “critical building blocks” for achieving our goals:

- 1. Core technical standards and functions**—Through our Standards & Interoperability (S&I) Framework, we will continue to work with industry stakeholders and federal and state governments to advance core technical standards for terminology and vocabulary, content and format, transport, and security.
- 2. Certification to support adoption and optimization of health IT products and services**—We will leverage our Health IT Certification Program to ensure that a broad spectrum of health IT conforms to the technical standards necessary for capturing and exchanging data to support care delivery.
- 3. Privacy and security protections for health information**—We will strive to ensure that privacy and security-related policies, practices, and technology keep pace with the expanded electronic exchange of information for health system reform. We will continue to assess evolving models of health information exchange to identify and, with stakeholder input, develop solutions to address weaknesses and gaps in privacy protections.





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- 4. Supportive business, clinical, cultural, and regulatory environments**—We need to migrate policy and funding levers to create the business and clinical imperative for interoperability and electronic health information exchange. In collaboration with employers, federal agencies, and private payers, we will help define the role of health IT in new payment models that will remove the current disincentives to information exchange.
- 5. Rules of engagement and governance**—The HITECH Act charged my office with establishing a governance mechanism for the nationwide health information network. We view this network as a continuously expanding ecosystem of electronic exchange activities and network service providers across the nation that rely on a set of standards, policies, and services to meet electronic exchange needs, including the privacy, security, and appropriate use of the information exchanged.

Along with these building blocks, we also outlined our expectations for three, six and 10 years down the road, which includes sending, receiving, finding, and using health information to improve health care quality while lowering cost. Then, by the 10-year mark, we want to achieve what we call a learning health system, in which information moves as seamlessly as it does in many other sectors of our life, whether that's telecom, or financial, or getting an airplane ticket. In the end, no one person, organization, or government agency alone can realize this vision of an interconnected health system. That said, together we can achieve the promise and potential of health information technology to improve the health of all.

On Meeting Communities Where They Are

When I speak with members of Congress, their staffs, and with various other stakeholders, there is agreement about our overall goals. That said, among this consensus, it's easy to lose sight of the diversity of ways in which care is delivered throughout this country. It's important that we take seriously the nation's various regional characteristics. I conduct listening sessions across the country and recognize that we have a responsibility to meet communities where they are and that not all communities are the same. Federal blunt policy instruments can miss the mark if we're not really listening to and really thinking about who we are here to serve.

On the Future

I think there's an evolving conversation about privacy and data. Big data is sexy today and everybody wants to use it for a host of purposes. I think there are some thorny issues that we need to tackle in aligning technological advances with



data security and personal privacy. We also have a power shift happening with consumers and innovators on the one hand and the health care system on the other. In my office, we need to think through the policy and technology challenges that will arise from facilitating nationally the adoption and use of interoperable health IT. The arc of our mission may be long, hard, and challenging, but it is also fun and exciting. I think technology is going to afford more opportunities for people to be empowered about their health and the care they receive. ■

To learn more about health information technology, go to www.healthit.gov.



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