Realizing the Promise of Health Information Exchange

by
Timathie Leslie
Leslie_Timathie@bah.com

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Health information exchange (HIE)—the electronic movement of health-related information among organizations according to nationally recognized standards[1]—has the potential to transform nearly every aspect of healthcare delivery in this country. Recent policies have helped fund major growth in the world of electronic health information, but these advances have only scratched the surface of what is possible.

The US government's overall goal is to encourage the creation of an environment in which electronic health information moves fluidly through the healthcare system, improving care coordination, reducing healthcare disparities, engaging patients and their families, and improving population health, all while ensuring adequate privacy and security. Fully realized HIE will allow providers to have comprehensive, intuitive, high-quality patient information at their fingertips to make the right decision for their patients, from prior patient laboratory tests to medical history, and easy access to research on evidence-based care. Progress is being made across the healthcare ecosystem. However, it does not appear to be proceeding as quickly as policymakers may have expected.

A December 2010 report from the President's Council of Advisors on Science and Technology (PCAST) stated that "significantly accelerated progress toward the robust exchange of health information" would be necessary to achieve the administration's goals.[2] True reform of the healthcare system will depend on having clinical data points available upon which to make decisions. At this point, clinical data exchange remains mostly theoretical; even the exchange of administrative data is fraught with challenges. In order to get the right incentives in place through both meaningful use and payment reform, we need a very focused and deliberate plan moving forward.

We are making progress, but it must move faster

As part of a broader effort under the Health Information Technology for Economic and Clinical Health (HITECH) Act to accelerate the adoption of health IT and the use of qualified electronic health records (EHR), "meaningful use" establishes incentive payments to eligible professionals and hospitals to promote the adoption and effective use of interoperable health information technology and qualified EHRs. The first of HITECH's three "meaningful use" stages focuses on digitizing health information—moving it from paper into an electronic format that can be transferred between various actors in the healthcare system. The draft stage 1 meaningful use requirements were widely seen as too aggressive when they were published and were met with significant resistance from the provider community. Even providers generally considered to be very advanced in the area of health information exchange, including Kaiser Permanente, the Mayo Clinic, Massachusetts General Hospital, and Intermountain Health Care, commented that they would struggle to meet the draft rules within the stated 2-year period. The American Medical Association and 96 other medical organizations sent a joint letter commenting that the draft rules as stated were too aggressive, and would have the unintended effect of deterring many providers from participating in Medicare and Medicaid incentive programs at all.

As a result, the final rules set a much lower bar than the draft document. While many more providers are moving to EHRs as a result of the program, the revised

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[1] Defined by The National Alliance for Health Information Technology in 2008 under contract by the Office of the National Coordinator for Health Information Technology.

[2] "Realizing the Full Potential of Health Information Technology to Improve Healthcare for Americans: The Path Forward," President's Council of Advisors on Science and Technology, December 2010. www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-health-it-report.pdf accessed January 11, 2011.

rules have slowed the intended progression of a time-bounded incentive program. Even if the Office of the National Coordinator for Health IT (ONC) is more aggressive in its stage 2 and stage 3 requirements, providers are likely to require additional assistance if the true HIE goals are to be realized.

Unfortunately, stage 1's softening of the rules also appears to be having the collateral effect of encouraging more point-to-point exchange. The PCAST report acknowledged that the initial focus on EHRs alone could exacerbate system incompatibility problems, slowing the progression further. Stage 2 and stage 3 meaningful use regulations are expected to encourage a more robust and patient-centric exchange across multiple and varied platforms.

According to recent deliberations of the Heath IT Policy Committee, stage 2 is likely to focus on the following: (1) improving quality, safety, efficiency and reducing health disparities; (2) engaging patients and their families; and (3) ensuring adequate privacy and security protections for personal health information. In designing the stage 2 rules, ONC should revisit the draft rules for stage 1. Stage 2 incentives must be focused on connecting providers on a one-to-many basis, increasing interoperability, and getting more holistic and population-based views of patient care. It is currently very difficult to obtain information from specialists; quality metrics will need to be built around specialty care. Policymakers will need to walk a fine line to set the right tone, avoiding overreaching the possible, but still working vigorously to achieve the overall goal within the three stages. Some experts favor pushing out the timeline for subsequent stages as one way to mitigate this tension. Others suggest that a follow-up effort may be necessary when the three stages have concluded.

The PCAST report also recommends that the Federal government should facilitate the development of the necessary infrastructure and exchange language. The government could then step back and allow the private sector to build on this work by developing its own products. Such an investment would facilitate the transition from individual EHRs that stay in one doctor's office to information that moves across a secure, medically useful system in modules that can be tagged with specific security and privacy specifications.

Payment reform is critical for the success of HIE

While much of the discussion of healthcare reform has focused on technology, payment reform is just as critical. The Patient Protection and Affordable Care Act of 2010 (ACA) includes payment and health delivery system reform initiatives that are aimed at improving quality of care and reducing costs for the Medicare, Medicaid, and Children's Health Insurance Program (CHIP) populations. It encourages the establishment of Accountable Care Organizations (ACOs), which should make it easier for physicians to focus on coordinating care and preventing avoidable hospitalizations.

A number of pilot projects offer financial rewards to physicians who keep chronically ill patients healthier and reduce hospitalizations. Payment reform should play a key role in Stage 3 of meaningful use, which is currently expected to focus on advanced analytics—managing populations across providers at the point of care. Incentives would be targeted toward results-based care, including monitoring patient compliance to prevent readmissions.

We need a better business case for sharing information

The current incentives have made it possible for many providers to deploy electronic health records, but there is still no business incentive for providers in general to share data with one another. Without payment reform, and a clear business case, data will not become truly liquid.

We have learned that health information exchange in today's fee-for-service payment system offers

many benefits for providers. It provides the flexibility to extend the reach and quality of care delivered to patients and to better coordinate care with other providers. Coupled with advances in communication technologies and devices used to remotely monitor, coordinate, and communicate patient status, the exchange of health information allows providers to access and act on information relevant to caring for the patient from almost anywhere in a way that care is not bound by place or time of practice. This also serves to enhance the relationship between patients and physicians, as well as promote more integrated patient-centered care. Some consider this disruptive to traditional appointment-driven, face-to-face practice models. It may be the key, however, to the success of emerging accountable care and patient-centered medical home models that reimburse for the quality of care rather than for the number of procedures or services performed.

Many physicians and hospitals are investigating the potential of becoming an ACO, a group of coordinated care organizations composed of primary care physicians, hospitals, specialists, and other providers. To effectively coordinate care at the population level for conditions such as diabetes or cardiovascular disease, information must be available across the entire healthcare system, not just within one network of providers. For example, a recent study found that almost two-thirds of fee-for-service Medicare beneficiaries who suffer a stroke are either deceased (45%) or back in the hospital (18%) within a year.[3] These rates varied widely among hospitals. With an ACO or similar organization in place, doctors would be more likely to use evidence-based care, and to follow better post-discharge strategies.

ACOs should have a major advantage in perpetuating evidence-based care, which typically takes more than 10 years to get into mainstream medicine. Data-rich environments tend to spur faster-than-usual culture change. Dr. Brian Jacobs, vice president and chief medical information officer at Children's National

Medical Center and a noted health informatics expert, shares the following example: a group of spinal surgeons in one institution were noted to have significant variability in hospital length of stay, cost of care, and morbidity. Data indicated significant practice variance, primarily related to post-operative care. The data was presented to the group and resulted in productive discussions, practice changes, and improved consistency in care. The business case for sharing may be more compelling as practitioners see improved quality of results as a result of HIE.

Providers must be involved from the earliest stages

As the PCAST report noted, current HIE tends to focus on point-to-point exchange of information. Few provider organizations are delving into the truly transformative services that would fundamentally change healthcare in the United States, improving patient outcomes, better managing costs, and reducing medical errors. HIE could improve the practice of evidence-based medicine, by indicating the most likely successful course of action in a seamless manner within an EHR—and by indicating when a planned course of testing or treatment is not supported by current science. HIE could also be a platform to better engage individuals, share information, and provide better coordinated disease management and wellness maintenance.

Doctors, nurses, and other health practitioners recognize the potential of exchanging health information, but note that they would be highly unlikely to log out of their EHR system and log in to a separate system to reach additional services. HIEs must be integrated into the providers' workflow. Additional health information must be user friendly, seamless, and performed "in the background"—the data needs to be in the right place at the right time, for the right patient, to provide instantaneous access to patient information and evidence-based clinical care data to provide effective results-based care.

3 Fonarow, Gregg C., et. al. "Hospital-Level Variation in Mortality and Rehospitalization for Medicare Beneficiaries With Acute Ischemic Stroke," *Stroke*: Journal of the American Heart Association, Jan 2011; 42: 112–118.

This will not be possible unless practitioners are involved in the early planning and design of how best to utilize HIE. For healthcare providers, clear vision, leadership, and well-defined requirements are prerequisites to procuring and implementing information systems that meet provider needs. The failure to recognize which systems or functionality they need, or where the systems fit into practice workflow, is often a result of incomplete or unclear requirements. Not seeing or realizing the value of systems can result in the lack of adoption and even misuse. The recommended engagement and stakeholder communication can also help overcome resistance and lay the groundwork for implementation. Involving practitioners from the earliest stages, including helping to determine requirements, increases the chances that the eventually deployed solutions will meet the practitioners' day-to-day needs and will therefore be widely used.

About the Author

Timathie Leslie, a San Francisco-based vice president with Booz Allen Hamilton, has more than 18 years of experience in the healthcare industry, assisting payors and providers with technology strategy, government relations, product development, and implementation. She advises state government and Medicaid organizations as they undertake health reform and modernization programs.

Prior to joining Booz Allen, she advised region-wide initiatives to bring health IT to their communities, worked directly with the state government as an advisor to a state commission focused on health IT and financing policies, and advised state and regional health information exchange efforts.

As a co-founder of Object Health, a management consulting group that merged with Manatt Health Solutions, she worked with several funding organizations to design innovative approaches to accelerating adoption of health IT among ambulatory care providers. She also performed numerous electronic health record (EHR) and chronic disease management system (CDMS) assessments resulting in published resources and product procurement.

Contact Information:

Timathie Leslie
Vice President
Leslie_Timathie@bah.com
415/627-3321

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