



Standards Insight

An Analysis of Health Information Standards Development Initiatives

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Washington weighs in on HCIT: What is the plan for the road ahead?

President Bush's call for electronic health records (EHR)'s in his State of the Union address has set off a four-month flurry of activity as Washington discovered healthcare information technology as a means to transform health care. What are we to make of a world where Senator Hillary Clinton agrees with Newt Gingrich's plans for investing in a 21st century healthcare information system and where, in turn Gingrich is collaborating with Representative Patrick Kennedy on a healthcare information technology (HCIT) bill?¹ We have reached the millennium, albeit a few years late.

In April, Health Level Seven (HL7) successfully balloted the EHR System Functional Model as a Draft Standard for Trial Use, reversing the previous defeat last year. Similarly ASTM successfully balloted the Continuity of Care Record (CCR) standard in March. Major medical societies, including the American Medical Association, the American College of Physicians and American Academy of Family Practice are publicly supporting electronic records.² The President's Information Technology Advisory Committee (PITAC) released its draft recommendations for accelerating adoption of health information technology.³ The eHealth Initiative published an extensive analysis of e-

¹ See NY Times Magazine (April 18, 2004) at www.nytimes.com and www.healthtransformation.net.

² See www.ama-assn.org, www.acponline.org and www.aafp.org.

³ www.nitrd.gov/pitac

prescribing implementation and adoption issues.⁴ In a speech at the end of April, the President again focused on the EHR, setting the goal of a universal personal health record within ten years and establishing a new department in Health and Human Services (HHS) to coordinate these efforts.⁵

There are five topics we must address to realize this potential: organizational and management direction, infrastructure funding, value propositions based on aligned incentives, a plan with roadmap and framework, and clear interoperability requirements.

Organization and Management Direction

Our industry has many leaders, visions and technology tools. We do not have organizational and management direction. A public-private partnership, not an advisory body, is needed to make decisions, develop consensus and adopt and execute plans. Perhaps the new department described by President Bush will provide this structure. Despite our national preference for a decentralized health delivery and payment system, a central point of decision, responsibility, coordination and management is needed: Not a heavy-handed Federal authority, but more than a series of demonstration projects and hit-or-miss results from local healthcare information exchanges. In the past we have argued that a unifying Federal HCIT vision should include a universal EHR that supports both individual care over a lifetime and the legitimate needs of all secondary users. The national health information infrastructure (NHII) must become the enabler of that universal EHR.

Infrastructure Funding

Infrastructure, by definition, is a shared resource and common good. In the case of a national infrastructure, we must look to the Federal government. Infrastructure investment for any single participating entity or function is difficult to justify. The responsibility falls to the overall corporate entity, in this case the Federal government, to come up with the funding, however the costs may be allocated back to us. All national infrastructure projects, not only the Internet, but interstate highways, electrification and universal access required Federal organization and funding.⁶ There must be a prime mover to make initial, at-risk investments that in and of themselves do not create a business return. There must be upfront investment to fund the necessary infrastructure and services that enable participating providers to share electronic health records. These funds must eventually be directed at more than pilots and local demonstrations and target nation-wide infrastructure. It is clear that without upfront funding, substantial progress toward a universal EHR will not be realized despite whatever levels of automation individual provider organizations may adopt for their own purpose and use.

⁴ www.ehealthinitiative.org

⁵ Speech presented on April 26, 2004 available at www.whitehouse.gov.

⁶ Of course this is the case of being careful for what we ask. An astute political leader has recognized that savings from investing in IT can be used for funding other health care services. Funding sources, whether general funds, provider taxes, or reduced reimbursement (a.k.a. unfunded mandates) are a separate political issue from the need for Federal management and investment.

Value Proposition and Aligned Incentives

Even with infrastructure in place, providers, and in some cases, consumers must accept and use EHR systems. The Federal government should lead the effort. Through payments for Medicare, DOD, VA, and Medicaid, the Government's share is almost a third of all healthcare costs. No other single entity, whether measured as employer groups or health plans, incurs double digit expenses in healthcare spending.

Last year when HHS set out to spur adoption of electronic health record systems, it consciously chose to focus on the ambulatory care setting for many good reasons. Most health care, in terms of encounters, is delivered in this setting. Chronic disease management, wellness and prevention are keys to long-term population health, consumer involvement and satisfaction. They will also help control spending and can be addressed through electronic health records in that environment. However, ambulatory care is primarily delivered by autonomous physicians in private practices reimbursed on piecework basis.

This shift in focus away from the inpatient hospital-centric model avoids potential political barriers. But it also moves us from the more capitalized and IT invested hospital system world to the fragmented, poorly capitalized and less automated physician practice.⁷ Financial incentives must be added to reimbursement formula. While loans and grants may be useful, only operating income will sustain implementation of these systems. Moreover, such funding should recognize and align the realizable economic benefits to providers as well as payers and consumers. Here is where the calculus of infrastructure costs versus infrastructure benefits can be balanced.

We must be careful, particularly with the Medicare focus on e-prescribing, to recognize that physician order entry and decision support depend upon an electronic health record system if they are to significantly address medical errors, improve quality of care, and control costs. Solving the problem of adverse drug events is but one reason for IT investment. More importantly using IT to enable evidence-based medicine promises to better control costs and provide more effective care to the entire population.

Roadmap and Framework

In addition to acquiring a managing partner, a public-private organization, infrastructure funding, and aligned incentives, we need "the plan". At its simplest, the plan should include a roadmap and a framework for how to proceed. The recent PITAC draft identifies four key elements of a plan: the EHR system, provider order entry, clinical decision support and health information exchange. A national infrastructure is necessary as the framework for organizing such interoperable IT elements. Even our grandest example of a highly decentralized system of autonomous players, the Internet, sprang from a central "source", DARPA, and is still "managed" by key centralized authorities,

⁷ While healthcare is routinely bashed for its low level of investment in IT, more than two thirds of health systems are investing in EHR systems and virtually all providers are automating billing, at least billing transactions, thanks to HIPAA mandates.

W3C being most prominent. A series of local experiments, unbounded by national expectations, is wasteful in resources and time. The Federal government should rightly be cautious in developing implementation directives. We can look no further than the well-meaning HIPAA “Administrative Simplification” and its profoundly mixed results in terms of privacy confusion, security me-too rules and managed care transaction delays. Use of demonstration projects, pilots and local implementations, as long as they are within the overall plan, is a much safer process.

Any roadmap and framework must start from the reality of today in order to move us to the future universal EHR. This includes the notion that medical records are created and maintained by providers even though the data belongs to the patient. We must fundamentally decide on a framework in which we move data from the provider to some “super” patient record or leave data at providers that is accessible from patient-centric directories. This is the single most important front-end design question.

E-prescribing as provided for in the Medicare Modernization Act is one track to a future EHR and a National Health Information Infrastructure (NHII). The opportunity presented by Medicare and the required physical exam for 65 year olds, as proposed by Newt Gingrich, is another controlled experiment. The Integrating the Healthcare Enterprise (IHE) approach of setting multi-year goals and implementing existing standards is another useful method.

Interoperability Standards

The HCIT industry, must come to consensus on the interoperability standards to be used. Is the CCR standard the basis for moving “summary” EHR data between systems? Is the HL7 EHR-S Model the basis for defining profiles of minimum expected functionality in provider systems? PITAC sparked another controversy in recommending that SNOMED be evaluated as an alternative to adopting ICD-10. How in fact will we encode or structure data and reports across the wide spectrum of care settings? Finally we must decide if HL7 Version 3 is better than HL7 Version 2 with its defined profiles. Do we build infrastructures and interoperable systems with what exists today, even though better standards may be available tomorrow?

These technology choices and trade-offs can’t be made without the plan’s framework and roadmap, and the underlying business case. In the past we have readily embraced technology solutions without understanding the business requirements and achieving consensus on the plan. This has led to the widespread perception that technical interoperability is the problem when in fact it is the unclear business requirements from our fragmented health care system of perverse incentives, autonomous providers and uninformed buyers. These remarkable four months of Washington attention have brought us to a “tipping point”. Before we rush forward with technology solutions, let’s insist on management direction, funding, value propositions and a plan.

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