



Standards Insight

An Analysis of Health Information

Standards Development Initiatives

February 2005

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The Promise and Challenge of HCIT in 2005

At the Annual 2005 HIMSS Conference and Exhibition to be held in Dallas, Texas this month, we expect to see technical demonstrations of interoperability standards within and between enterprises as well as vendors' latest versions of enterprise electronic health record (EHR) systems, decision support and other clinical applications. Integrating the Healthcare Enterprise (IHE) (www.himss.org/ihe) will demonstrate a prototype Regional Health Information Organization (RHIO) implementation using existing standards and integration profiles to share medical records and documents among many different system vendors. Health Level Seven (HL7) will demonstrate use of its interoperability standards including EHR systems and e-prescribing, interoperating with National Council for Prescription Drug Programs (NCPDP) SCRIPT messages. We anticipate that HIMSS 2005 will be dazzling in its breadth and depth of healthcare information technology.

In the year since the last HIMSS Annual Conference, we have seen remarkable progress in establishing a universal EHR and a national health information network as national priorities. However, in our interest in promoting "IT solutions," we might step back and examine the problems we are addressing. We can start with our healthcare system that delivers effective care 55 percent of the time, that makes errors that may kill more than 100,000, and that wastes over \$100 billion a year.

While judged inadequate by many, healthcare providers do spend about 3 percent of their total budget on IT – the not insubstantial sum of \$25 billion a year. Now there is

speculation that such spending must be substantially increased. One might ask what more new spending will achieve that past efforts have not. Certainly the answer is not by continuing to provide interoperable systems and functions that reinforce the old paradigm of individual provider autonomy (i.e. if care providers just had all the data, they would do the right thing), which has produced the above-mentioned results. But correctly aimed and implemented, HCIT can be a key enabler of transforming health care for the 21st Century.

We see 2005 as a year of transition from strategic vision to action plans, requiring resolution of three key HCIT issues:

- Defining what we want to achieve.
- Deciding how we can do it.
- Determining how this will be funded.

What do we want to achieve? Resolving the issue of “minimum functionality”

The EHR system has become shorthand for a comprehensive clinical system. We can group most clinical functions within that context. The EHR itself is just one function of the system. Planning, ordering, scheduling and documenting care, advanced decision support and clinical workflow automation are all viewed as functions of the EHR system rather than discrete applications. In the case of the HL7 EHR system functional model, now a Draft Standard for Trial Use (DSTU), there were several hundred EHR functions identified. In fact the DSTU attempted to enumerate all possible functions that one could expect to find now or in future EHR systems. It was left to future work to define which functions constituted a minimum set for a particular care setting. This work is now in progress within the HL7 EHR Technical Committee for several care settings in the U.S. realm, including small to medium physician practices, small hospitals and nursing homes.

The concept and criteria for establishing a minimum function set has been difficult and sometimes contentious. In establishing a minimum, one is setting the goal of what we want to achieve now and over the next 18 months and what will be possible in the foreseeable future. In its conception the HL7 EHR system functional model intended to justify inclusion of a function based on the literature and best available evidence. This has devolved more to “expert” IT judgment, commercial interests and a bias for optimized information system design rather than improving clinical processes and outcomes. As noted earlier, most health care provided in the U.S. is neither evidence-based nor standardized. Thus we can hardly expect more from information systems. The danger in setting “minimum functionality” is automating a broken and fragmented care system optimized for unaffordable IT success.

When the Centers for Medicare and Medicaid Services (CMS) originally approached HL7 about producing an EHR system functional standard, it was with the intention of using the standard to determine which physician practice systems would qualify for differential payment. There was some thought, based on collaboration with the Leapfrog

Group, that such functions would merely expand the concepts of e-prescribing, e-labs and e-reminders. In fact, to enable clinicians to transform healthcare, we must focus on simple, fast and minimal requirements for both functions and interoperability. As an example, the new initiative from the Institute for Healthcare Improvement (www.ihp.org) proposes six “simple” bundles and processes, none of which require extensive computerization, that would save 100,000 lives per year if applied to about half the hospital beds in the U.S. Of course, we should plan so that new functions and interoperability can be added over time but not at the expense of delaying what we can do and afford now. Thus, pragmatic approaches like those in e-prescribing and as demonstrated by IHE should have as careful consideration as more elaborate frameworks and industry planning councils.

Obviously CMS’ initial interest sparked significant concern among both providers and vendors and contributed to the spirited consensus building in the initial DSTU concerning “minimum functions.” Volunteer-based consensus building can be seen as slow and unpredictable, so now there are other potential “minimum function” arbiters including the newly formed Certification Committee for Healthcare Information Technology (CCHIT) and the Commission on Systemic Interoperability. Each in its own way could establish minimum functional requirements by deciding what functions to certify or by making recommendations to Congress and the White House.

While the Office of the National Coordinator of Healthcare Information Technology (ONCHIT) has sought “public-private” collaboration, its role in coordinating federal HCIT initiatives should not be discounted. For example, the Veterans Administration is offering its EHR system for private use, a step short of making it a default requirement. In Europe it appears that EHR systems may be “regulated” as medical devices and the Food and Drug Administration (FDA) has never foresworn its role in software regulation. Similarly CMS has reserved its options in deciding whether or how to embrace “pay for use” or “pay for performance” initiatives.

The “minimum function” issue has many dimensions beyond the clinical value proposition, including regulation, certification, reimbursement and legal standard of care (i.e., medical liability). But in the end, these minimum functions should reflect the best we can do in the short term with an eye to the future that enables willing clinicians to transform health care. Resolving this issue, translating the big vision into system requirements, whether by consensus, closed-door politicking or regulation is a necessary step in moving forward. But once done, this definition frames the issues of transition from where we are today and the level of funding required.

How do we do it? Solving the transition issue

Medicare begins Part D coverage of prescription drugs on January 1, 2006. It is likely to be accompanied by the first mandatory e-prescribing standards, the use of NCPDP SCRIPT messaging between prescribers and pharmacies. Of course these rules will not mean that all prescribers will use e-prescribing applications or that all who do will transmit prescriptions electronically. Many practices will, for a time, use handwritten prescriptions, faxed or hand carried to pharmacies. More practices will use software to

fax or printout prescriptions. In the meantime in order to meet the high-level functional requirements of the Medicare Modernization Act, application vendors and standards developers will be working to add shared, interoperable medication lists, medical history and advanced decision support functions. The prescription drug plans will be designing financial incentives to promote the use of e-prescribing. Over time, and potentially in just a few years, the benefits of e-prescribing will be realized.

This is likely to be the pattern for transitioning to interoperable EHR systems: high-level “minimal” functional requirements implemented in phases, as funding, applications and standards are available. Phasing must account for the current state of systems’ functional performance and identify minimum data sets to be shared between enterprises. Look at the hand-offs with the highest evidence-based leverage, such as medication lists. To the extent that we can get ahead of events, laying out a roadmap to implement EHR systems that require minimal functions and minimal levels of interoperability would be very valuable for demonstrating benefits. Such cost-benefit analysis, calculated over time, is necessary to obtain funding.

How will we pay for it? Addressing the funding issues

The industry received a wake-up call when Congress chose not to provide project funding for ONCHIT. As we have noted repeatedly in *Standards Insight*, the business case is the driver for individual provider investment in HCIT while Federal funding is the catalyst for infrastructure investment. The former is likely to require changes in reimbursement, e.g., “pay for performance,” as well as more complex changes in the patterns of care. Because of its market clout, CMS must take the lead, perhaps in partnership with private payers and insurers, in reshaping reimbursement and aligning incentives. The infrastructure, as a shared good to be used by all, will not get done without front-end Federal funding and leadership. The longer the overall national health information network is left hanging, the more expensive and difficult it will be to retrofit and replace the new e-prescribing and EHR systems that we are elsewhere encouraging.

2005 will unfold whether or not we resolve these issues. But given the remarkable strategic accomplishments of 2004, we have a great foundation upon which to build and an opportunity to serve – not to be lost.

Please direct any questions, suggestions or comments regarding *Standards Insight* to Joyce Sensmeier, HIMSS director of professional services, at jsensmeier@himss.org or to its author Ed Larsen at erlarsen@erlinc.com.