Standards Insight

An Analysis of Health Information Standards Development Initiatives

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In the February issue, we examined the impact of the e-prescribing provisions of the Medicare Modernization Act (MMA) on interoperability and suggested that e-prescribing models would drive development of the national health information infrastructure (NHII). It is clear that e-prescribing is a component of an electronic health record (EHR) system and that sooner or later there must be convergence. By adding Medicare beneficiaries to the e-prescribing pool, the MMA becomes the turning point for e-prescribing as well as the EHR and NHII. In late May the National Committee on Vital and Health Statistics (NCVHS) commenced a series of e-prescribing hearings that fully illustrated the tension between e-prescribing and the EHR/NHII.

NCVHS, per its mandate under the MMA, began to examine the need for interoperability standards that will enable e-prescribing. Multiple stakeholders testified, including representatives of e-prescribing vendors, networks and users. While the hearings were focused on standards, the discourse was really about implementing an e-prescribing system and program in the context of an EHR. The NCVHS is caught in the dilemma of limiting its scope to this mandate and recommending e-prescribing standards to the Secretary of Health and Human Services (HHS), yet clearly seeing the need for convergence between e-prescribing and the EHR within the framework of the NHII framework. In fact it is not just the NCVHS, but the entire industry that has an interest in this convergence.

The Requirements of the Medicare Modernization Act

Fundamentally the MMA requires an e-prescribing option for the Medicare prescription drug program by 2008. There are, of course, conditions. Participation by prescription drug plans (PDPs), physicians and pharmacies is voluntary, but inevitable. The PDPs that are to manage Medicare drug benefits can offer incentives for participation. The PDPs must also provide information to consumers about their benefits, costs and formularies. Since the prescription benefits program is not designed as full or first dollar coverage, the expectation is that there will be widespread consumer demand for computer access and e-prescribing.

The MMA sets forth a timeline in which NCVHS is to provide the Secretary of HHS with recommendations for e-prescribing standards by September 2005. In 2006 the Secretary must conduct trials of the system with a deadline of April 2008 for adoption of the final standards. Any electronically transmitted prescriptions for Medicare participants must use the final standards no later than one year after adoption.

The MMA requires that electronic prescribing programs offered by PDPs provide prescribing physicians and dispensing pharmacies with specific information including:

- Information on the drug being prescribed as well as the medication history with appropriate interactions, warnings and alerts, which implies access to patient specific medication lists and other personal data.
- Information on the availability of lower cost alternatives, which implies patient/plan-specific formulary access.
- Information from the medical history of the patient, i.e., the EHR, will be applicable in the second phase.
- Finally, the MMA requires, to the extent feasible, that information be exchanged on an interactive, real-time basis.

The Need for More than Interoperability Standards

It should be apparent that interoperability standards are but one component of implementing e-prescribing. Last month in reviewing the EHR/NHII conundrum, we outlined five points we believe are necessary for moving forward: organizational and management direction, infrastructure funding, value proposition and aligned incentives, a plan with a roadmap and framework, and clear interoperability standards. These points also apply to both implementing e-prescribing and insuring its convergence with the EHR and NHII.

Leadership, management and direction

First we need management and direction. While the MMA can provide the overall direction, HHS must drive the program. We cannot have multiple Federal agencies and advisory committees each advancing parallel agendas. The prescription drug benefit is the single largest increase in Medicare entitlement since its inception. Thus the Centers

for Medicare and Medicaid Services (CMS) must and will play a role in establishing the business rules and shaping value propositions. But is CMS to be charged with implementing the e-prescribing system in the context of the EHR/NHII? The Secretary should explicitly designate the lead, which might well be the new National Health Information Technology Coordinator.

Infrastructure funding

Unlike the shared EHR or NHII, e-prescribing exists and is in use, albeit in a small percentage of total prescriptions. The economic basis is the profit motive of prescription benefit managers and their clients, large payers. Implicit in the MMA is that the prescription drug plans will control Medicare drug costs in a similar manner. Thus one might expect that the e-prescribing infrastructure would represent a build-out of current networks, directory services and content providers. This utilitarian model may be the best solution, particularly if the Federal government seeks to avoid infrastructure investment. But an NHII that looks a lot like e-prescribing networks may be different from those of a shared EHR. This is the time for the Federal government to invest in the best strategy.

The value proposition and aligned incentives

The business case for e-prescribing is still mixed. Incentives are misaligned and the value proposition for all stakeholders must be clarified. This is one reason why e-prescribing has not captured more than 5 to 10 percent of current prescriptions. As long as we continue to operate under the assumption that e-prescribing creates $27 billion in savings, we will fail to address the underlying economic problems blocking investments in additional systems that are needed.

In its comprehensive Electronic Prescribing Initiative report, the eHealth Initiative (www.ehealthinitiative.org) identified that we are still dealing with the lack of a business case for the prescribing physician. While the PDPs and others, such as health systems, can provide incentives and minimize capital investments, e-prescribing represents an upfront investment in workflow change and, in the long term, added work and services. Clinical decision support - the underlying driver of improved care and cost controls - adds to the total system costs and workload of the prescriber and dispenser. Whether retrospectively or in real-time, they must deal with new clinical alerts, many of which will not be relevant. Moreover, deeper decision support is linked to an electronic health record system. Let us be clear, all of these are presumed to be highly valued services to the patient and payers. But if they change the system requirements and workload of the prescribers and dispensers, do they require different reimbursement? We currently do not have the data to know.

In advancing the value proposition, we must clearly address the funding sources, use of incentives and conflicts of interest. There are many among the physician representatives who want to insure that there are no commercial interests in the e-prescribing system. Yet that is patently impossible when economics to patients and payers are the underlying drivers. Defining formularies, constructing tiers and therapeutic classes and setting co-

pays, all represent commercial interests of the participating physicians, pharmacies, PDPs, pharmaceutical vendors, sponsors and payers. At best we can hope for transparency of interests.

Roadmap and framework

E-prescribing creates a de facto NHII. It employs a network, directory services, security, data exchange among repositories and clinical applications. Do we accept and build on this architecture and framework or is there a better model? As noted earlier, e-prescribing networks will eventually need to support exchange of EHR data. They will also link all the care providers across the continuum. While the current e-prescribing networks and services are not inherently in conflict with an NHII or even a local health information infrastructure (LHII), they do represent a specific example that will constrain or run parallel to other local or silo models.

Interoperability standards

It is clear that the NCVHS recommendations for e-prescribing standards will be the same core set of messaging, and code standards that they have previously endorsed: HL7, NCPDP SCRIPT messaging and SNOMED terminology. But more implementation details must be provided. HL7 and NCPDP are working to map their standards, a crucial link between hospitals and physicians and prescriptions and EHRs. Recommendations for drug codes and therapeutic classifications are not as straightforward since each database is valuable but incomplete for some use cases and not yet fully mapped. We are at a similar point as we were when ASC X12 messages were designated as the standard for use in HIPAA transactions – much detail is left unresolved and, in many cases, unrecognized.

Convergence

E-prescribing cannot be implemented in a vacuum. It is inherently a function within an EHR system, which in turn must fit into the NHII. Right now, all three are on different timelines and roadmaps and without a common framework. We can allow each to proceed as best and as fast as they can and hope they converge in the future or we can stop long enough to recognize that we need a plan now.

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