The NHIN Highway Is Already Paved

The Existing HIPAA Transaction Exchange Network Is an Able Solution for the Conveyance of Clinical and Administrative Information

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Introduction

The healthcare industry is presently focused on building a national health information network (NHIN) requiring standards-based data exchanges to send and receive clinical information efficiently, confidentially and reliably. The Health Insurance Portability and Accountability Act (HIPAA) of 1996 established a process for the Department of Health and Human Services (HHS) Secretary's adoption of industry standards for electronic transmission of administrative data. The industry has significantly benefited from the resulting defined information exchange formats. Using this established model for conveyance of administrative information, the industry is well positioned to extend the model to improve and promote the exchange of clinical and other healthcare data.

Today, most healthcare providers are efficiently submitting healthcare claims to payers for payment through secure networks. At the same time, many industry experts are working to create Regional Health Information Organizations (RHIOs) or Health Information Exchanges (HIEs) – networks conveying administrative and clinical data. Unfortunately, many of these efforts are leveraging the existing HIPAA data exchange mechanism and standards as well as the potential benefits these type of standards for the transmittal of both clinical and Adminstrative healthcare data. In an evolving industry with escalating costs, it is imperative that leaders collaborate, consolidate efforts and communicate openly among the many systems and constituents that comprise the industry. The welfare of the public depends on the healthcare industry functioning effectively and efficiently, reducing duplication of work, improving efficacy of care for positive patient outcomes.

This document asserts that the existing HIPAA transaction exchange highway is suitable for use to securely transmit clinical and other healthcare data and calls to initiate the development of a road map to demonstrate how this information highway can provide the basis for the movement of clinical and administrative data. Using an existing comprehensive health information exchange will supersede the need to create another separate healthcare information network.

The Road to the Future: Clinical & Administrative Information Sharing

Just as the Federal-Aid Highway Act was established in the mid-1950s for the construction of an interstate highway system, the healthcare industry requires investment—from both public and private sectors—to establish an electronic information highway to support the NHIN.

The initial Federal-Aid Highway Act of 1954 set aside $175 million; however, funding was increased to $25 billion by 1956 to pay for the creation of an interstate highway system as Eisenhower envisioned it. The interconnectivity of a massive, national highway system was achieved, accomplishing Eisenhower's vision. Millions of disparate vehicles—cars, trucks, 18-wheelers, RVs, motorcycles—share these highways today, traveling in accordance with standard rules of the road.

The vision for an electronic information highway for healthcare mirrors this example. The government and the industry concur that a secure infrastructure of electronic pathways for administrative and clinical data exchange is necessary to ensure expedient, accurate healthcare

for citizens/patients. Because achieving high quality, cost effective healthcare is a high national goal, it has received federal focus and resource allocation. Current federal funding is targeted to support pilot projects at the regional level, though the ultimate goal is the establishment of a national information system that connects the regional networks.

Presently, the scope of efforts does not align with the expansive nature of the envisioned electronic health information highway. Financial sustainability is one of the primary areas of misalignment. Federal and state governments, and the private sector, are searching for a formula that will provide the necessary capital and operating income to launch and maintain the NHIN.

The Healthcare Super Highway

At the time of the creation of an interstate highway system, very few roadways already existed, and fewer still were fit to support the potential traffic volume that would ensue upon project completion. The opposite is true, however, in the creation of an electronic information highway. Today, billions of electronic healthcare information transactions travel along an already 'paved,' secure information highway—from the point of care to the point of payment and back. The healthcare clearinghouse industry created this existing information highway, and HIPAA standardized the vehicles (i.e., transaction sets and message standards by ANSI-accredited standards organizations) that travel upon it.

In fact, nearly all healthcare claim information in the United States is electronically exchanged along this highway. Healthcare information technology organizations, like RelayHealth, SSI and CareMedic, are in the business of running and maintaining today's information exchange highway. For example, the traffic volume Emdeon's portion of the national highway alone is staggering: over 1 billion electronic claims, more than 500 million real-time eligibility transactions and 1 billion+ payment transactions are transported securely each year.

The healthcare clearinghouse industry has for 25 years maintained and added to the roadways of information exchange on behalf of customers in the payer and provider sectors. These customers are "covered entities" under HIPAA, as are clearinghouses. The industry's payers, clearinghouses and providers strictly adhere to mandated HIPAA Privacy and Security Rules. Additionally, their transaction highways are certified by the Electronic Healthcare Network Accreditation Commission (EHNAC) and meet its stringent requirements for performance quality and integrity. To obtain EHNAC accreditation, an electronic data interchange vendor must meet more than 150 criteria for quality performance in five areas: privacy and confidentiality, technical performance, business practices, resources and data security.

Why Are We Building ANOTHER Highway?

Unfortunately, many decision makers are disregarding or are not adequately informed of this existing, fully functional information highway and are investing tremendous funds, time and effort into the analysis, prototyping and development of new exchange mechanisms to support RHIOs and HIEs. These regional entities are developing slowly and could benefit from strong coordination with healthcare clearinghouse networks. Based on responses from the survey conducted by the E-Health Initiatives in 2007, HIEs are presently falling short in efforts to create

adequate electronic exchange mechanisms. The performance and limited scope of transacted information of HIEs could be improved with coordination and sharing of lessons learned from the clearinghouse industry that exchanges an enormous volume of data daily.

The Demand for Clinical Information Access

The regional approach for the creation of health information exchanges began in 2004. On April 27 of that year, President Bush issued Executive Order 13335, which articulated the goal of "the development and nationwide implementation of an interoperable health information technology infrastructure to improve the quality and efficiency of healthcare." The focus was primarily on the creation of a new infrastructure to exchange healthcare information. The establishment of HIEs and RHIOs was left primarily to the local level, with seed funding for a number of selected initiatives.

Slow Progress—The Challenges of RHIOs and HIEs

As of 2007, 80% of communities nationwide had not begun to engage in HIE discussions. Clearly, the approach of awarding responsibility for the creation of information exchange at the local level is resulting in slower and patchier implementation than likely was originally anticipated. The aforementioned 2007 E-Health Initiative survey of HIEs found that of 130 entities responding, only 34% were exchanging lab data and 32% were exchanging outpatient visit information. An even smaller percentage of HIEs was exchanging information on emergency department visits. Though the purpose of HIEs is the improvement of the quality of care and patient safety, only a modest number had made substantial progress toward these goals at the time of the 2007 survey.

The survey also looked at the obstacles for information exchange. By far, the most significant obstacle revealed was the establishment of a viable long-term business model for the HIE. The survey also reported that security and privacy, as well as the ability to define the value that accrues from HIEs, were performance-affecting concerns.

Perhaps even more telling than survey results was the fact the number of respondents fell from the previous year. While many factors may attribute to decreased response, the reduced survey participation reflects a general slowing in the development of HIEs. Though there are some notable exceptions, the slowing of such efforts at so early a development stage raises the question of whether HIEs are too complex, too expensive or too fractured to take hold in communities with already strained resources.

At this time, the idea of reusing this HIPAA information highway should be brought to light. It is a proven, viable technical and business model, not only for the 80% of communities that have not yet begun HIE efforts but also for other communities with HIEs in process but struggling.

Administrative Information Exchange Transactions Paved the Way

The challenges of today's HIEs are like those faced in the 1980s and 1990s when healthcare organizations searched for and found methods for sharing administrative information. At that

time, providers and payers who sought to share data on subscriber eligibility, claims submission for care delivered and payment remittance lacked a consistent and cost effective approach for exchanging information electronically. Providers became increasingly capable of submitting administrative transactions electronically and dealt with payers who required varying formats, coding schemes and transmission mechanisms. Payers were forced to accommodate providers who had varying levels of capability to submit transactions. In the end, the standardization achieved through HIPAA at the national level—and the ability of clearinghouses to address individual provider needs at the local level—resulted in a system for data exchange that is secure, cost effective and capable of handling the exchange of millions of transactions daily.

Consider five current challenges of slowly evolving RHIOs and HIEs, paralleled with similar challenges solved in the quest for administrative transactions more than a decade earlier.

1. Finding a Sustainable Business Model – RHIOs are particularly challenged to determine a business model that can be sustained for the long term. Thus far, these entities have relied on grants and start-up funding to function. That approach will not thrive over time. In contrast, organizations that exchange administrative data have built a successful model based on cost sharing, with payer and provider revenue contributing toward expenses. The concept of "paying for what you get" is also applicable to the sharing of clinical data.

2. Eliminating Communication Layers, Complications – RHIO and HIE communications are often clouded by the participating organizations' need to seek as well as share information from and with each other. In the layered mix of entities attempting to both inquire and respond, there are typically elongated delays from the time information is requested and the time information is received. The same challenge is true in the realm of administrative transactions, where payers and providers must constantly exchange information regarding claim submissions. However, the administrative channel introduced the use of clearinghouses—in most cases—to navigate around unscalable single point-to-point exchanges, making communication significantly more efficient.

3. Adopting Equitable Levels of Technology – Not only are the relationships among organizations that wish to share information complex, but also their capacity to share information varies widely. Large acute care facilities with electronic health records (EHRs) seem to be the best prepared to share information, while physician practices, where EHRs have been adopted more slowly, are far less capable. A similar situation has existed and been addressed for administrative transactions where clearinghouses leveled the playing field by delivering value-added services to enable even those providers with paper-based offices to submit claims electronically.

4. Creating Standards and Coding Structures – Clinical information exchange is also constrained by governing standards that are poorly understood, inequitable or non-existent. For example, the standards for the interchange of lab information are reasonably clear, while patient encounter information standards are not. For the administrative information sector, HIPAA brought significant clarity to both the structure and the code sets for the information exchanged while ongoing efforts by groups such as the Committee on Operating Rules for Information Exchange (CORE) refine business rules related to the transactions.

5. Integrating Information Sharing into Workflow – The adoption of clinical information sharing is also hindered by the lack of integration of electronic information into caregiver workflow. Most current HIEs rely on portals that require caregivers to break away from their normal workflow to retrieve information. Conversely, administrative transactions evolved from direct data entry portals to employ technology that automatically captures information in providers' systems; ensuring data is more simply integrated into the standard processes and workflows of organizations.

Clearly, the challenges of sharing clinical and financial information mirror one another. While the clinical information exchange is in its infancy, the financial data exchange is vibrant and evolved. Amply supported by the public and private sectors, it has successfully navigated around inevitable issues for over 25 years.

The Key Players in Clinical Information Exchange

Multiple constituents in the healthcare network must supply and receive clinical information to achieve the goals of efficiency and improvement of the quality of our healthcare delivery system. Hospitals/health systems, labs, imaging facilities, physician practices, surgical centers, government databases (Medicare/Medicaid) and pharmacies may be involved in interchange of information at any given point in the healthcare delivery process. While care is normally initiated by a practitioner in a local or regional facility, the process may extend well beyond regional borders to involve facilities, labs and other knowledgeable workers and providers outside the reach of the HIE or RHIO. Acquiring and conveying data outside the regional realm—and successfully processing that data—is a notable obstacle for HIEs and RHIOs. The protocols and nature of data vary significantly. Developing consistent, reliable methods and nomenclature for capturing, sharing and utilizing such data is a major undertaking.

The existing HIPAA transaction highway is already adequately expansive and equipped to handle the challenge. Healthcare information technology organizations supporting the HIPAA transaction highway have advanced capabilities to exchange incredible volume of sensitive electronic data. Data is received, processed and securely conveyed to and from a range of stakeholders on these highways—stakeholders that most certainly are also necessary participants in the conveyance of clinical information.

Organizations leading the financial data exchange already possess knowledge of the unique technical nuances of potential participating parties for administrative information interchange. This knowledge can be extended and supplemented for clinical information. By making use of this knowledge, the current demand/supply inequity that exists for clinical electronic access may be addressed for quicker and more secure integration of all healthcare information.

In the Headlights: Security and Privacy Issues

As HIEs and RHIOs seek to forge methods for data exchange, a core concern is that methods developed be secure to ensure privacy for all parties involved. Security and privacy are of utmost importance as the nation advances toward electronic medical records (EMRs) and healthcare consumers become increasingly involved in the payment and determination of their

healthcare options/procedures. Security of data exchange and privacy for all stakeholders is a non-negotiable imperative that may best be achieved by building on the existing HIPAA transaction highway that already safely handles millions of data exchanges daily.

Today's healthcare industry is strongly shaped by its integration of HIPAA's national standards for privacy in accessing and handling medical information in the electronic age. HIPAA standards touch nearly all aspects of healthcare functionality. Certainly, this is true for the transaction standards that govern processing of claims information. The American National Standards Institute (ANSI) standards transaction sets have taken HIPAA standards and translated them into the literal secure conveyance of electronic data at a level unsurpassed in any other aspect of the healthcare industry.

Safe and Sound - The Proven History of Mandated & Self-monitored Healthcare Data

When HIPAA outlined the basis of privacy and security for the industry, healthcare information technology organizations—clearinghouses—established the secure communication channels for processing claims transactions as well as developed secure portals for communications between the provider, the clearinghouse and the payer.

Converting data from the original data capture to a compliant 837 transaction created many opportunities for further developing and establishing access controls, and for appropriately managing the industry's ability to cross-reference data from previous claim formats. Part of the security development of clearinghouse systems provided mechanisms to ensure the authenticity, integrity and confidentiality of transactions via secure communication channels—while providing reliable document exchange and bolstering the mutual trust between communicating parties. These features exist today.

Those in the financial/administrative transactions industry agreed there was a need for a self-governing body to develop standards for the industry. Recognizing this, the Association for Electronic Health Care Transactions (AFEHCT) championed the cause of accreditation by sponsoring an Accreditation Workgroup. This group's preliminary efforts were enhanced by surveying other representatives in the industry, as well as by studying other accreditation entities such as URAC (Utilization Review Accreditation Commission) and the Joint Commission. Through these thorough efforts, the first industry standards for data transmission and data security were created and, ultimately, the structure for EHNAC and its policies were developed. Established as an independent accreditation organization, EHNAC began accrediting the electronic health network in 1995. The EHNAC accreditation program promotes administrative simplification, standards, quality service, innovation, cooperation and open competition and establishes criteria for industry self-regulation for entities such as electronic health networks, clearinghouses, transactions processors, value-added networks (VANs), financial institutions and their vendors, payers, providers and provider management organizations.

The Link between Secure Financial Data Exchange and the Future of Healthcare

The ability to link healthcare providers, facilities, payers and clearinghouses securely improves the coordination of healthcare and the collection and collaboration of information among

healthcare providers. The interoperability among systems for the exchange of information utilizes the secure communication channels designed to ensure the privacy and security of protected health information.

As healthcare electronic data interchange moves beyond the transmittal of claims and related transactions to include EMRs and personal health records, health savings accounts and real time transactions, the existing secure structures in the healthcare information technology industry will afford opportunities for the exchange of more detailed and complete healthcare accounting, patient history, medication lists and other clinical information.

A Proven and Trusted Super Highway

As HIPAA Privacy and Security rules enhanced the protection of electronic transactions, they also supported the Internet as the common conduit for electronic claims and related transactions. While there are no standards of data access or usage policies within the industry, clearinghouses have paved the way for the security of the data through their business relationships in the industry. This reliable, proven and trusted information highway offers a distinct advantage to those on the quest for a means to convey clinical data.

On-Ramp to the Future: The Convergence of Clinical and Financial Data Exchange

The business of healthcare is in a state of significant evolution, rapidly altering to involve more consumerism, transformed payment options, blending of functionality between insurance and financial institutions and, as detailed within this text, heightened technology—specifically regarding electronic interchange of clinical information.

The McKinsey Quarterly recently documented this rapid evolution in two reports, *What Consumers Want in Health Care* and *The Coming Convergence of US Health Care and Financial Services.* While the reports discuss issues touching the convergence of clinical and financial data for the industry only indirectly, the overriding themes are undeniably relevant. The changes for the industry are preceding full-throttle, not awaiting the nod of any group or entity, bringing the increased demand for timely, accurate and complete information. This requirement leads to the inevitable blending of types of data interchange in a "once-in-a-generation" opportunity.

Clearly, the exchange of financial and administrative data crisscrossing the nation millions of times each day, connecting a menagerie of businesses and organizations with a multitude of data of wide-ranging formats, is the most pliable and reliable starting point for the conveyance of clinical data. This information highway is federally endorsed, proven secure and is trusted by virtually every physician office, laboratory, radiology center, hospital, home health agency and other providers, as well as payers and government agencies. As the "once-in-a-generation" opportunity for data convergence is upon the healthcare industry, there is not ample time to accommodate inefficient and fractured efforts for this endeavor. The industry is changing without halt, and it would be a disservice to attempt to reinvent the transaction highway for HIEs. Every speed bump must be avoided to build momentum in the ability to exchange clinical data as effectively and efficiently as financial data. The network of businesses and organizations presently involved in Electronic Data Interchange (EDI) is prepared, knowledgeable and ready to

partner to achieve the best solutions for the convergence of clinical and financial data.

The business of healthcare is ultimately shaped by the purpose of healthcare, which is to offer citizens the right medical services, efficiently delivered, to maintain and/or improve their physical and mental well-being. Because national resources are limited, part of the well-being of citizens involves their assurance that the financial aspects of their care are being stewarded responsibly. In fact, the *McKinsey* consumer report found that patients were more concerned regarding the affordability of their healthcare than they were about the care itself.

While we focus energy and attention to the technological evolution occurring at the business end of our industry, we must be motivated and focused on the purpose of the industry—to efficiently meet the needs of the patient—as a whole. Therefore, it is imperative to default to the best, most efficient solution for clinical data transmittal, the existing HIPAA transaction exchange highway.

References

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Editor's Note

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