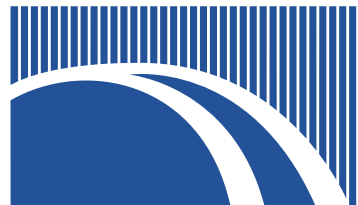


# Reducing Transaction Costs and Improving Profitability with Health Information Portals



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**A**fter decades of significant technological advancements, a substantial part of the practice of medicine and the business of healthcare is still dependent upon getting information from point A to point B. This is still the case, whether it's getting patient information into the hands of clinicians for decision making, or ensuring member eligibility so claims will be accepted by payers. Recent technological innovations, however, have the potential to change the model in which care is delivered, and the way that organizations manage the business of healthcare.

Internet technologies have opened the floodgates to a torrent of information for professionals and consumers. However, healthcare organizations are only starting to tap into the benefits of this public infrastructure. While some organizations access Web sites to check eligibility or clinical reference information, the use of these technologies as a conduit for secure transaction exchanges is still in its infancy. While security is still a valid concern, several technologies provide for secure communications that are substantially more reliable and confidential than the paper-based information that is locked in file cabinets, hand-carried between departments, mailed, or sent via fax.

More and more healthcare organizations are beginning to use these technologies as business utilities to exchange information and transact business. These information and transaction exchanges are taking place between payers and providers in both metropolitan and rural areas to facilitate information sharing among communities that are geographically dispersed. More than simply gathering data from static Web sites, these Internet portals are enabling healthcare organizations to exchange financial and clinical information that drives care delivery and supports businesses. Most importantly, these information exchanges are taking place on a community-wide level and are linking the clinical, claims and administrative information from multiple healthcare enterprises.

The potential costs savings facilitated by these electronic solutions are substantial. For example,

research has shown that it costs a provider organization \$7 to \$12 to file a paper-based claim, but it only costs \$1.50 to \$3 to file the same claim electronically. Traditional customer service inquiries typically cost \$5 to \$7 each, while an electronic inquiry costs 5 cents to 25 cents.

This white paper explores the capabilities and fundamental models for these transaction exchange portals and profiles the successes achieved by some early adopters.

### **WHAT IS A HEALTH INFORMATION PORTAL?**

What are these portals called? How are they defined? These answers are still being defined. Some call them health information portals. Others call them healthcare transaction portals or transaction exchange portals. The difference between health information portals and other commonly known portals (i.e., Yahoo) is that health information portals facilitate two-way transaction exchanges for businesses. In the end, the name or term for these portals is not important, as the portals themselves are not necessarily a product, but a concept. The concept is to efficiently and cost-effectively exchange standards-based information securely among constituents within the community to facilitate and improve care delivery and business processes.

Healthcare information portals are not a new concept, but the evolution of some previous concepts, aided by advancements in technology that extend their functionality and cost effectiveness. Many may recall the community health information networks (CHINs) of the late 1980s and early 1990s. CHINs were intended to provide electronic information sharing among various stakeholders in the healthcare continuum. For the most part, the CHIN movement failed because most models were largely vendor centric, required the sharing of sensitive information among competitors, and modeled around large data repositories that were prohibitively expensive and difficult to implement.

Considering this history, many healthcare executives are quick to dismiss any CHIN concepts. The quick rise and rapid failure of the CHIN movement

attached a negative connotation to the term. Since then, the word “CHIN” has become a symbol of an era — a time when politicians proposed sweeping healthcare reforms and the Internet and other technologies were expected to quickly cure the industry’ ailments.

Sadly, the negative connotation of CHINs leads many healthcare executives to overlook the potential benefits of the concept, which is to connect constituents within the community to share information. Regardless of what they are called, today’s health information portals have demonstrated the benefits of increasing efficiency, reducing costs, and improving care delivery and quality. There are primarily two approaches for creating a health information portal: community-wide repositories, and transaction exchange portals.

### **COMMUNITY-WIDE REPOSITORIES**

The community-wide repository approach was the initial model proposed — and even partially implemented — by several CHIN vendors in the late 1980s and early 1990s. The goal of the original CHIN approach was to facilitate the exchange of information, but in practice, the majority of resources and technology were consumed with the collection of information. This approach, however, is still proposed by some vendors.

Referred to by some as “the big bucket” approach, this solution centers around a massive data repository where all the clinical and financial data resides for the members that are participating in the initiative. Data from the provider and payer organizations is pushed out to the repository, and users query the repository for information.

Two barriers prevented the community-wide repository approach from becoming the model for all other healthcare information portals.

1. The cost of developing the infrastructure was prohibitive, and connectivity, coupled with bandwidth limitations, made the solution exceedingly complex.
2. Prospective members of the initiatives — both payers and providers — had concerns about

competitive and security issues, since the “mixed” data would reside within a single centralized repository. Additional concerns focused on who would own and control the information, and who would have access to the information under various scenarios.

### **TRANSACTION EXCHANGE PORTALS**

Instead of massive data collection, transaction exchange portals focus on connection. By using a distributed data model, these portals act as a conduit to connect queries with data, rather than collecting and storing data, which was the repository approach. For example, a user may query the portal for information about member eligibility. The portal searches for the appropriate data source gathers the information and sends it back to the user. Data passes through the portal and is not stored, other than the audit trails about the user’s session, which alleviates concerns about data ownership or competitive information sharing.

This approach shares similarities with peer-to-peer networking, although that technology does not afford the complex security requirements necessary for healthcare. Sharing confidential and patient-specific information requires high levels of security, but today’s technologies can successfully accomplish this at a much lower initial cost than was previously possible.

The biggest benefit of transaction exchange portals is the cost effectiveness. Hardware requirements are minimal, and connectivity can be achieved via encrypted Internet connections, virtual private networks or dedicated wide area networks. On the user side, “fat” client distribution and software licensing expenses can be eliminated by accessing the portal with standard Web browsers.

### **OVERCOMING IMPLEMENTATION BARRIERS**

Although there are technological challenges to implementing health information portals, perhaps the biggest barriers are issues of leadership, politics and competitive drivers. Connecting for Health, a proponent for the development of interoperable health information infrastructure, detailed these

barriers in its report “Clinical Data Exchange Efforts in the United States: An Overview.”

“It is not necessarily the technical roadblocks that have most limited opportunities for clinical data exchange — but instead:

- Overcoming the difficulty in bringing diverse stakeholders together toward a common goal.
- Carefully addressing the need to protect privacy and security; creating the governance models; agreements, policies and practices for building these kinds of exchanges.
- Building a compelling and sustainable model for devoting ongoing funding, resources and commitment to these projects.”

Although the report focused only on initiatives involving the exchange of clinical information (vs. financial or administrative data), the report’s findings are indicative of the challenges that face any health information portal effort. The following brief case studies provide overviews of several health information portal initiatives, the benefits they have realized, the technology models that they have employed, and some insight into the non-technological obstacles that they face.

### **WESTERN NEW YORK HEALTHENET**

Members of Western New York HealtheNet (WNYHealtheNet) in upstate New York saved more than \$2.4 million last year by participating in a community health portal to access member information. By collaborating on the development of their community health portal, the three payer and provider organizations within WNYHealtheNet estimate that they save upwards of \$6.3 million a year by sharing the costs associated with salaries, benefits, infrastructure, software licenses and system maintenance. It’s estimated that the participating organizations would have spent as much as \$17 million to develop their own solutions if they would not have collaborated on the project. In contrast, the seven founding members of WNYHealtheNet have spent less than \$5 million to develop the solution.

The technology driver behind WNYHealtheNet is a transaction exchange portal that provides a single

point of access to information from multiple disparate data sources. The enactment of the transaction and code set standards mandated by the Health Information Portability and Accountability Act (HIPAA), prompted the founding members to form WNYHealtheNet as a solution to achieve transaction compliance.

The development of WNYHealtheNet began in early 2001, with the initial roll out of online eligibility checking starting in June 2002. WNYHealtheNet now links more than 15,000 physicians within the community and surrounding eight counties, and has processed 6 million healthcare transactions. Roughly two-thirds of western New York providers are signed up and using WNYHealtheNet, which represents nearly 9,500 provider users on the system.

One of the members, Buffalo, N.Y.-based Kaleida Health System is recovering \$120,000 a month — \$1.44 million annualized — in co-pays that were previously not collected due to the lack of information about member eligibility and co-pays. Catholic Health System in western New York, is recovering \$82,000 a month — \$984,000 annualized — in co-pays that were previously lost.

Payer organizations also benefit from WNYHealtheNet. HealthNow, a WNYHealtheNet payer participant, realized a significant increase in transactions while reducing the amount of calls and costs associated with its call center volume for inquiries by enabling additional access to online information. The improved efficiency of this new system, and the reduced volume needing to be handled by the call centers, enabled HealthNow to avoid call center costs of nearly \$20,000 a month, and eliminated the need for \$8,600 a month in dial-up lines. Combined, these efforts reduced annual costs to date by more than \$340,000, and there are additional cost savings due to improved claims accuracy and reduced adjustments as well. Another WNYHealtheNet payer participant, Independent Health, reduced its cost of handling provider eligibility inquiries by 31%.

WNYHealtheNet has recently expanded its services to

offer online referrals and pre-authorizations community wide. Some of the participants previously had legacy-based electronic referral and authorization systems. The benefits of online referrals to all can be demonstrated by an example from one of the participants, Independent Health. Its current solution has processed over 10 million transactions, including more than 750,000 referrals in the last three years. Previously handling referral inquiries by phone used to cost \$2.50 each, and now cost 50 cents per inquiry when they are handled electronically. The online referral system reduced Independent Health's rework on referral transactions by 75%, and has substantially improved provider relationships.

WNYHealtheNet anticipates that it will experience similar successes community wide with its referral and pre-authorization and referral solution.

#### **SANTA BARBARA COUNTY CARE DATA EXCHANGE**

In contrast to the WNYHealtheNet health information portal, which was created and funded through an initiative led by its founding members, the Santa Barbara County Care Data Exchange has been funded through a \$10 million grant from the California HealthCare Foundation.

The Care Data Exchange uses a transaction exchange portal model and is designed to provide a simple and secure way to access patient data by authorized users who have informed consent for organizations within Santa Barbara county, Calif. It is a public utility that is available to all physicians, caregivers and consumers within the county. The Care Data Exchange connects 11 provider organizations to share clinical information, but not financial information. More than 40 public health clinicians are involved in the pilot program, with additional phases of the program to be rolled out after technical issues have been resolved.

Despite its challenges, the Care Data Exchange has demonstrated some substantial successes. Now in its final phase of pilot testing, the Care Data Exchange is expected to provide \$1 million net financial benefit annually to the community, which is figured by forecasting improvements in outcomes, reduced

readmissions, lower salary costs, and decreased costs for lab and radiology services.

The cost reductions are the result of organizations sharing in the implementation and maintenance costs of solutions that facilitate the exchange of clinical information. Although the "first movers" initially shoulder the financial burden, the cost-to-benefit ratio improves substantially as utilization of the portal increases. In a scenario forecasting a high penetration of the Care Data Exchange within the community, the annual cost of the portal would be \$2.2 million, but the participating organizations would receive \$7.3 million of benefits.

The Care Data Exchange is now exploring local governance and financing models, and has commissioned a third party to evaluate quality and service.

#### **NEW ENGLAND HEALTHCARE EDI NETWORK**

The New England Healthcare EDI Network (NEHEN), unlike the Care Data Exchange, focuses on the exchange of financial and administrative information. Created in 1998, NEHEN was originally created to serve as a portal for member eligibility checking. Since then, NEHEN has expanded its capabilities to include claims submissions, claims status inquiries, referrals/authorizations, and patient self-service features.

NEHEN is a not-for-profit corporation formed and owned by more than 20 healthcare organizations in eastern Massachusetts. NEHEN's objectives include the creation of a common technology platform to exchange insurance transactions between regional providers and payers, and the development of a common set of guidelines and policies for implementing transactions and governing the network. NEHEN also uses a transaction exchange portal model.

Like the other health information portals, NEHEN has demonstrated some substantial successes. One large specialty clinic has decreased the number of days that bills are in accounts receivable by 37%, going from an average of 75 to 47 days, in a one-year

period. In other organizations within NEHEN, claim rejections due to eligibility checks have decreased by 53%, and the cost of an eligibility check has dropped from \$2.64 to 10 cents.

Throughout NEHEN, portal participants are experiencing large reductions in their cost per transaction. NEHEN estimates that it used to cost \$5.24 to manually process a transaction, and now costs only 15 cents. Whereas NEHEN participants used to spend \$10.4 million annually on transactions, the portal has now reduced that cost to \$1.4 million annually. For eligibility checking alone, NEHEN participants are saving \$972,890 a year by reducing labor costs, improving collections, and sharing implementation costs.

In February 2003, Partners HealthCare, a NEHEN participant, began using personal digital assistants (PDAs) to capture charges for inpatients and for clinicians to view lab and radiology results. The PDAs have improved the billing process and reduced accounts receivable days from an average of 54 to 37 days. Partners HealthCare and NEHEN continue to evaluate additional roll outs of PDA devices.

## **THE FUTURE OF HEALTH INFORMATION PORTALS**

Healthcare organizations are continuing their search for solutions that can help the industry reduce its rapidly escalating costs. Health information portals have demonstrated their abilities to improve the clinical and financial performance of healthcare organizations and have a clear and commanding return on investment. The challenges, at this point, are more political than technological. To realize the benefits of health information portals, healthcare entities will have to overcome the organizational, leadership and ownership challenges that prevent them from realizing the remarkable benefits available.

In addition, health information portals provide the foundation for organizations to implement solutions that provide additional functionality, such as electronic prescribing, computerized physician order entry, as well as mobile and wireless technologies. Health information portals, combined with these additional technologies, will enable healthcare organizations to transition into more efficient businesses, and, ultimately, evolve into enterprises that provide a higher level of care quality.