MISSION RHIO

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A Blueprint for Successfully Developing, Financing and Sustaining a Regional Health Information Organization (RHIO)

Audience:

This paper is intended for those interested in or entrusted with the mission of researching and developing a RHIO. Special attention has been given to presenting a framework for developing the proper infrastructure, while clearly identifying a practical and proven financial solution to ensure formation and sustainability.

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Mission RHIO:
Introduction

The IT Dilemma - Improving Patient Care While Controlling Costs

As an industry, healthcare lags far behind in its use of information technology (IT) to improve efficiency and prevent errors. Inefficient processes and communications conducted via telephone, mail and fax affect the quality and timeliness of care delivery, chart information quality and the efficient administration and financing of healthcare services.

Poor access to information can be deadly. A study by the Institute of Medicine estimated that between 44,000 and 98,000 Americans die needlessly each year as a result of medical errors. Accurate patient medical history information could save lives if it reached medical practitioners in remote medical offices, emergency rooms, laboratories, hospitals, pharmacies and other delivery sites.

To be successful, each RHIO must employ a feasible and sustainable financial model.

Regional Health Information Organizations (RHIOs) have emerged as a strategy for enabling healthcare providers to share critical information electronically, creating a clinical communication system to improve patient safety. There are many different approaches to building a RHIO, but to be successful, each RHIO must employ a feasible and sustainable financial model. To that end, a successful RHIO must bring healthcare providers, payers and other stakeholders together in a connected community that uses technology to improve quality of care, safety, and efficiency. The most effective RHIOs will not only facilitate the exchange of healthcare information between institutions and practitioners, but also between the insurance companies, third-party administrators and government healthcare organizations that pay for patient care. As a result, these RHIOs will improve the quality of care for patients while reducing the inefficiencies and costs of providing care.

The time to take action is now. A significant portion of the capital needed to develop and sustain the IT infrastructure for healthcare interoperability can be found from within the industry as it already exists. This white paper outlines a method for finding it.

Mission RHIO:
Moving towards Healthcare Interoperability

Standards Evolve

HIPAA failed to create a viable healthcare e-commerce environment.

By the mid-1990s, Congress and the healthcare industry agreed that standards for the electronic exchange of administrative and financial healthcare transactions were needed to improve the efficiency and effectiveness of the healthcare system. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) required the Secretary of Health and Human Services to lead the adoption of standards. At the time, about 400 different formats existed for healthcare claims. Without standardization, it was almost impossible for providers and payers to exchange data electronically. Thus, the healthcare industry remained largely paper-based in its patient care, record keeping, claims management and accounting functions.

Ultimately, HIPAA failed to create a viable healthcare e-commerce environment. Rather than mandating a standard information technology infrastructure to handle processing of the transactions through electronic data interchange (EDI), it left this role to the private software industry. Each healthcare provider and health plan needed to create an internal platform for coding and sending transactions. In the end, many institutions implemented only enough to meet the standards without unlocking the financial benefits available through their adoption.

HIPAA solved only a portion of the problems that stand in the way of fully integrated electronic healthcare management. There are many business issues that still need to be solved. Moreover, HIPAA was not intended to address standards for sharing or exchanging clinical data between healthcare providers.

The Call for a National Health Information Network (NHIN)

The proper use of information technology to store and exchange information holds the potential to reduce medical costs by as much as 20 to 30 percent.

The urgent need for improved use of IT in healthcare has led to intense discussion on a national level, with President George W. Bush calling for widespread adoption of electronic medical records (EMRs) within the next 10 years. As the President noted, the current system “is costly and is wasteful, and sometimes horrible – sometimes harmful.”

The federal government has established a goal of creating a National Health Information Network (NHIN) of interoperable systems supporting healthcare delivery, offering features such as unified single patient views, longitudinal patient medical records and electronic prescribing of medication.

Without a doubt, a NHIN can save lives by making a patient’s medical files accessible to authorized medical professionals anywhere in the country. The successful implementation of a NHIN will also offset the continuing rise in healthcare costs through the proper use of information technology to store and exchange information. Many experts estimate that medical costs will be reduced by as much as 20 to 30 percent.

However, creating the NHIN will entail a significant investment. A study published in the *Annals of Internal Medicine* estimates total capital costs to be $156 billion over five years and operating costs at $48 billion annually. These are daunting figures for organizations with limited operating budgets.

States Forming Regional Health Information Organizations (RHIOs)

RHIOs themselves will be the engines of the national system.

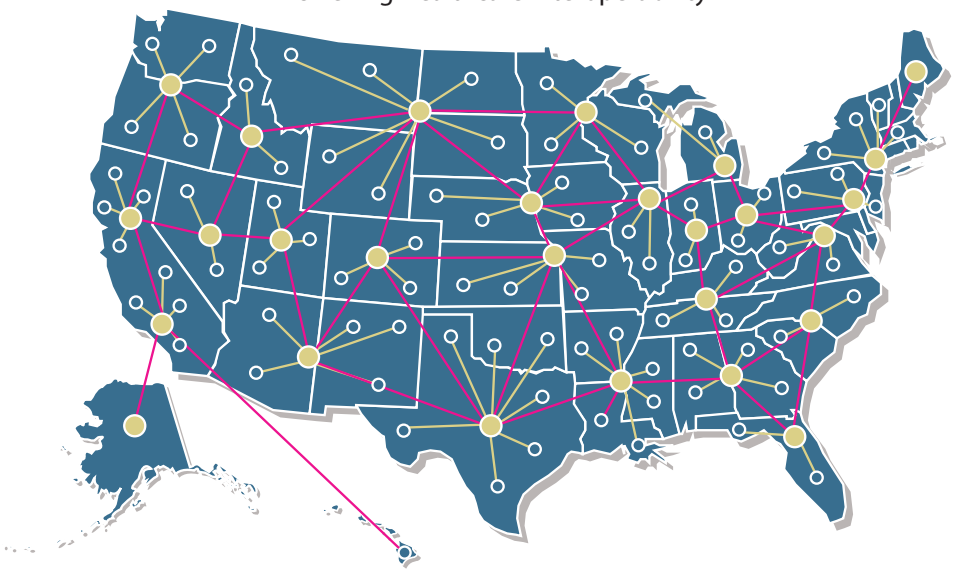
Current plans call for the federal NHIN to connect a number of statewide or regional networks, known as Regional Health Information Organizations (RHIOs). The NHIN will set standards for interoperability, connectivity and data exchange between RHIOs, but the RHIOs themselves will be the engines of the national system.

The Utah Department of Health has documented that residents receive quality healthcare at costs per person averaging 25 percent less than the national average.

The process of creating these RHIOs has begun. Regional variations have emerged and will continue to develop based on the healthcare needs, concerns and objectives within each community. Even with these variations, the ability to connect to a national network is key to establishing a comprehensive healthcare interoperability solution. In addition, states and regions that create successful, financially sustainable networks will enjoy significant economic and public health benefits. In particular, lower healthcare costs enable job growth and retention and have the potential to give consumers more disposable income.

Areas of the country that have established healthcare IT networks already are reaping the benefits. Recognized by the Department of Health and Human Services as the first successful statewide RHIO, the Utah Health Information Network (UHIN) has improved the quality of healthcare and held down associated costs in that state. The Utah Department of Health has documented that residents receive quality healthcare at costs per person averaging 25 percent less than the national average.

Achieving Healthcare Interoperability



Mission RHIO:
Achieving Clinical Communication Systems

Clinical Foundations Drive RHIO Initiatives

Healthcare providers are in the business of saving lives. Doctors and hospitals are quick to adopt new technology to improve the quality of patient care, and they have spearheaded the drive for better use of IT in healthcare. Much of the momentum for creating RHIOs stems from the need to record and exchange patient care information through electronic medical records (EMRs). Several existing RHIOs based on clinical transactions have demonstrated the potential to improve patient care by electronically sharing information related to EMRs such as lab reports, prescriptions and discharge notes.

Imagine the following scenario:

- *On Monday a mother takes her son to the family physician for a sore throat. The physician prescribes a simple antibiotic and sends them home.*
- *On Tuesday her son is feeling better so she sends him to school.*

- *About mid-morning the mother receives a call from the school. Her son became violently ill and was rushed to the nearby emergency room. Rushing to the hospital, the mother arrives to find a group of physicians, nurses and lab technicians in a room looking after her child. They cannot tell what is wrong. The caregivers are frantically performing tests, examining the child and looking for the cause of the condition.*
- *Upon the mother's arrival, the physician asks her about possible causes for the condition. Is he on medication? Does he have any allergies? When was the last time he visited a physician? With her answers to these questions, the physician examines the child again, this time looking for a drug interaction. After receiving the appropriate treatment, thankfully, the child starts to improve.*

Today, using a vehicle identification number, a mechanic can find out more about the work history on a car than physicians can find out about the medical history of their patients.

Similar scenarios happen every day. The delay of care could have been damaging to the health of this child, although fortunately in this case it was not. If the provider could have accessed the prescription and medical history of the patient electronically, appropriate treatment could have begun immediately. Without the timely and complete delivery of healthcare information, up to 100,000 Americans each year will needlessly lose their lives due to medical errors.

Today, using a vehicle identification number, a mechanic can find out more about the work history on a car than physicians can find out about the medical history of their patients. The goal of a RHIO is to make the proper information accessible in the fastest time possible to physicians and caregivers, who then can provide optimal care.

However, several barriers stand in the way of creating or sustaining systems to exchange patient medical information. Clinical technology and healthcare information standards are quickly evolving. It is difficult for individual physicians and hospitals to keep pace with all the changes. This becomes even more of a challenge in creating a RHIO that must move data between caregivers in an effective, consistent, usable manner. Moreover, the cutting-edge technology that enables sharing of clinical information can be very expensive, and the public or private grants used to fund the start-up and initial operating costs may not sustain the organization.

Developing a Complete Patient-Centric Approach

A complete patient-centric approach includes the acquisition of patient demographic data, the delivery of care and the subsequent payment for care experience.

Today, many healthcare experts talk about a patient-centric approach to healthcare data. Typically, this approach involves only the clinical information about the patient, which identifies only a portion of the problem. A complete patient-centric approach includes the acquisition of patient demographic data, the delivery of care and the subsequent payment for care experience. The collection and use of patient data begins at the time of registration and does not end until payment for care is received.

The baseline for effective clinical information is the acquisition and verification of the correct demographic data for the patient. The demographic data required can be as simple as name, address, gender, date of birth, social security number and insurance coverage. Though most professionals acknowledge the need for accurate demographic data for fiscal responsibility, they have not always recognized the damaging effects of inaccurate demographic data on the clinical process.

Most professionals are not aware of the damaging effects of inaccurate demographic data on the clinical process.

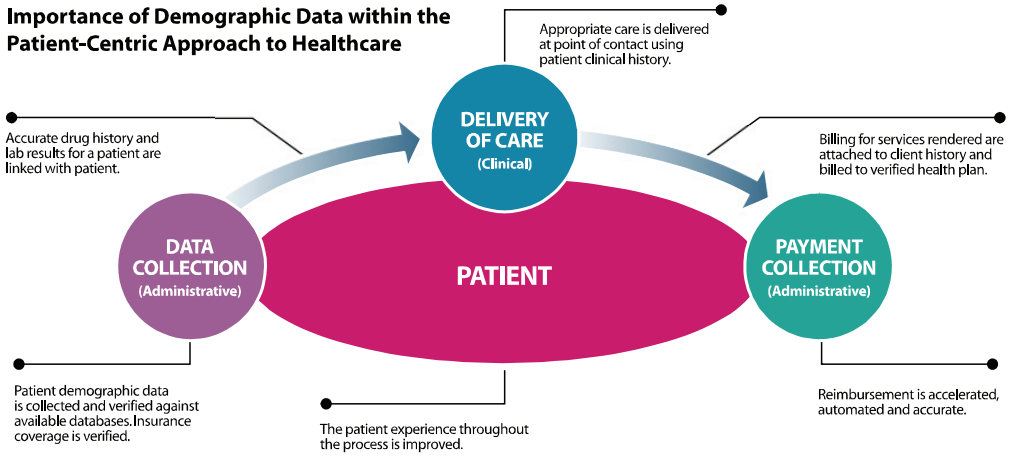
Inaccurate or inadequate collection of demographic data poses the following problems within the clinical setting:

- *Pharmacies depend upon demographic information for finding formularies and drug history. According to Randy Boldyga at RxNT, the no. 1 customer service complaint for his ePharmacy company is inaccurate demographic information. Inaccurate information prevents locating data for the patients, and in some cases, the wrong patient's data is retrieved.*
- *Laboratories depend upon accurate demographic data for reporting results and for billing. Yet, currently, laboratories have inaccurate information about 40 percent of the time. This issue causes laboratories to make numerous phone calls to the referring physician to attempt to collect the correct information.*

- *RHIOs are building master patient index (MPI) systems. MPI systems develop algorithms to index a person based on demographic information. These systems depend upon accurate demographic information to identify the correct patient. If the information is incorrect or incomplete, then the same person may be indexed as two different people. In some cases, EMR records have been associated with the wrong patient, making the situation even worse than the paper-based system that exists today.*

To prevent discrepancies, a RHIO can use existing databases to verify accurate patient demographic information. This information can be validated against the demographics available through the health plan's databases

Utilizing demographic data as the foundation of a RHIO offers additional benefits: knowing the insurance eligibility and financial status of the patient supports emerging healthcare funding mechanisms such as healthcare savings accounts; eligibility verification assists the provider in identifying the health plan response for payment; accurate information facilitates fast, accurate payments from health plans and responsible parties.



Mission RHIO:
A Financial Model that Works

Most of the RHIOs are struggling to find a business model that weans them from the public and private grants used to fund their startup and initial operating costs.

Many RHIOs in various stages of development are struggling to find a business model that weans them from the public and private grants used to fund their start-up and initial operating costs. As a result, their long-term survival becomes a challenge. Without a tangible return on investment and a feasible financial structure, these initiatives may eventually suffer the same fate as most Community Health Information Networks (CHINs) did in the 1990s. Few of these initiatives exist today.

To be self-sustaining, RHIOs must implement a funding model which is supported by the healthcare community they serve and which provides an adequate source of funds to cover development and operation. The best opportunities for funding come from those most likely to benefit from a tangible return on investment (ROI).

Examples of funding models that have been successfully implemented by RHIOs or have the potential to generate sufficient funding include the following:

- Employers pay a per plan member/per month fee
- Payers pay a per claim fee
- Physicians pay a monthly access fee
- Hospitals pay a monthly access fee

- Additional transaction fees - i.e. per lab report, per EMR, per medication history, etc.
- Access fees from public safety reporting organizations (ie. Center for Disease Control, Homeland Security)
- Hybrid models combining some or all of the above funding opportunities

Examples of real-world implementations of these funding models include the Utah Health Information Network (UHIN), recognized by the Agency for Healthcare Research and Quality (ARQH) as the "most likely to provide financial sustainability", based on payers paying a per claim fee and providers paying an annual membership fee. Other RHIOs, like the Taconic Health Information Network and Community (THINC), use an employer per member/per month model which encourages providers to utilize healthcare information technology.

Improving the Business Proposition

Over $200 billion in health care spending nationally is devoted to insurance administration

RHIOs can improve their clinical business value proposition by incorporating the information architecture needed to electronically move data concerning healthcare claims, eligibility and payments between healthcare providers and health plans. Using paper, faxes and telephone calls to perform these administrative functions consumes a significant percentage of healthcare expenditures. According to a 2005 study by the University of California, billing and insurance paperwork consume at least one out of every five dollars of private insurance healthcare spending in that state, suggesting that more than $200 billion in healthcare spending nationally is devoted to insurance administration.

It costs healthcare providers an average of $6 to $12 to file a paper-based claim. In contrast, it costs only about $1 to file a claim electronically.

Much of these costs arise from inefficient, paper-based processes. The insurance industry employs an army of clerical workers to handle incoming phone calls and to process paper claims. A study conducted by the American Medical Association estimated that it costs healthcare providers an average of $6 to $12 to file a paper-based claim. In contrast, it costs only about $1 to file a claim electronically. **By fully incorporating the electronic movement of administrative transactions and maximizing financial savings from improved administrative efficiencies, a RHIO can generate enough money to self-fund initiatives for exchanging clinical and administrative data on an on-going basis.**

The cost savings generated by efficient electronic exchange of administrative information can actually generate funds needed to implement clinical initiatives.

The standards and technology for using computers to exchange this administrative information are better established and more stable than the evolving standards for clinical information exchange. Incorporating administrative functions into a RHIO supports a more controlled, predictable implementation and facilitates the on-going operation of a RHIO.

Whether based on clinical or administrative foundations, a RHIO must create a robust architecture to process both clinical data and administrative transactions to improve the quality of healthcare, lower costs and function as an economically viable organization. Clinical and administrative processes must interoperate in order to successfully improve the quality of care and financial efficiencies of a RHIO.

Delivering ROI

Administrative networks can quickly deliver a return on investment.

To create an economically sustainable RHIO, an information architecture must be developed to collect and exchange the administrative information that supports patient care. Healthcare providers must be able to verify a patient's health plan coverage before providing care. Often, they must obtain pre-authorization from a health plan before performing a clinical procedure. They also need to send accurate billing information to the health plan or other payer in order to be paid.

This same architecture can be incorporated to move clinical information. The most important return on investment will be found in the timely and accurate delivery of care based on the best information available. Inaccurate demographic data causes clinical data errors such as the inability to find accurate drug history, allergies and lab results for a patient. If the correct patient

The combination of automated administrative and clinical transactions through the same network interface will create a much greater ROI for most care givers.

information is not delivered when required, the patient's health can be greatly at risk.

The cost savings generated by efficient electronic exchange of information related to eligibility, claims and other administrative processes can actually generate funds needed to implement or sustain clinical initiatives, such as electronic medical records (EMRs), Computerized Physician Order Entry (CPOE) and Master Patient Index (MPI) systems.

Administrative transaction capabilities must be a core component of the RHIO. RHIO projects based solely on clinical initiatives put the cart before the horse. There are significant financial, legal and technological hurdles associated with the implementation and operation of clinical initiatives. In contrast, both the technological and legal frameworks exist to exchange administrative information, and implementing an administrative network costs only a fraction of the potential costs of establishing a clinical network.

Hospitals could reclaim an average of 2 to 4 percent of total revenue by implementing systematic eligibility verification and claims processing using HIPAA EDI transactions.

In addition, administrative transaction networks can quickly deliver a return on investment. A 2005 study published in *Health Affairs* quantified the cost savings of a fully implemented electronic healthcare information exchange and interoperability (HIEI) network between providers (hospitals and medical group practices) and independent laboratories, radiology centers, pharmacies, payers, public health departments and other providers at $77.8 billion per year once fully implemented.

Adoption of the administrative healthcare transactions as standardized by HIPAA has not occurred to the extent needed to achieve major cost savings. Many experts believe there remains a very strong return on investment available from implementing healthcare administrative data exchange. As the healthcare community adopts clinical transaction exchange, there is an opportunity to also implement administrative healthcare data exchanges. The combination of exchanging both clinical and administrative information through one health information exchange network offers the opportunity of a higher return on investment.

Many providers believe there are not sufficient benefits available to justify the expenses of an EMR system, and they are delaying the purchase of clinical information systems or EMRs. By enabling providers to exchange both clinical and administrative information there is more economic benefit for providers. There is also an important quality benefit in having accurate electronic administrative information. By capturing and validating the demographic information available from health plans, the unique identification of patients is more certain and exchanging electronic medical records is safer and more reliable for patient care.

Benefits to Providers Through Automation

Reimbursement management is a pressing concern for most healthcare providers, many of whom struggle to maintain positive cash flow and operating income. Industry trends show that both cash on hand and net operating revenue for many hospitals have decreased significantly over the past few years.

The growing number of self-pay patients in many areas of the country contributes to this problem. A RHIO can create an uninsured database so that providers can verify the lack of insurance and save considerable time trying to investigate and reduce write-offs and the need for collections.

RHIOs can help providers identify hidden sources of payment for open patient accounts by using the HIPAA eligibility transactions. A recent study showed that only 17% of the patients brought a current benefit ID card to the provider's office. The RHIO can assist providers in discovering health plan coverage for many more patients.

HTP's experience with hospitals across the country shows that about one-third of all write-offs are avoidable, because many self-pay patients are, in fact, covered by private health insurance or government health plans (sometimes retroactively). Hospitals could reclaim an average of 2 to 4 percent of total revenue by implementing systematic eligibility verification and claims status

processing using HIPAA EDI transactions. Moreover, giving the patient accurate information about health insurance coverage, deductibles and co-pays can enhance the patient care experience.

Benefits to providers include:

- *Improve staff productivity.*
- *Improve patient satisfaction.*
- *Maximize reimbursement on every account.*
- *Maximize cash collection.*
- *Eliminate incorrect self-pay classification.*
- *Minimize bad debt write-off.*
- *Ensure fastest time-to-payment.*
- *Minimize losses on claims sent to collection.*

Under UHIN, healthcare providers receive payment for commercial claims in seven days or less, 85% of the time.

The RHIO can provide the environment for low cost benefit eligibility determination, claims submission, claims status verification and remittance advice processing to significantly enhance a provider's revenue cycle. An example of these benefits can be clearly seen in Utah where healthcare providers within the UHIN RHIO receive payment for commercial claims in seven days or less, 85% of the time.

Payer Benefits Resulting from Provider Automation

A RHIO can create the environment for the payer to finally obtain the provider participation to effectively eliminate paper claims from smaller provider offices, eliminate phone calls for claim status and eligibility, and effectively distribute electronic remittance advice.

The RHIO environment creates the opportunity for payers to improve administrative efficiencies through:

- *Electronic claims submission.*
- *Increased auto-adjudication rates.*
- *Elimination of dependency on clearinghouses.*
- *Reduced phone calls and manual processes.*
- *Fraud and abusive billing practices detection.*

Payers and providers can direct some of the cost savings generated by efficient use of the administrative transactions to the RHIO to fund technology needed to exchange clinical data.

A RHIO can benefit from the efficient use of administrative transactions by payers and providers. Some of the cost savings generated can be directed to the RHIO and be used to fund, implement and operate the technology needed to exchange clinical data.

Payers are beginning to realize the beneficial effects that electronic medical records can have on their plan management in areas such as:

- *Pay for Performance*
- *Triggers for Case Management*
- *Indicators for Effective Patient Training*

Combining clinical and administrative functionality into a RHIO fosters an environment for payers and providers to work together to enable cost effective delivery and efficient financing of healthcare services.

Mission RHIO:
A Blueprint for Developing a Successful RHIO

RHIOs Defined

The Health Information Management Systems Society (HIMSS) defines a Regional Health Information Organization (RHIO) as "*a multi-stakeholder organization that enables the exchange and use of health information, in a secure manner, for the purpose of promoting the improvement of health quality, safety and efficiency.*" This health information is encoded as data in a variety of formats to allow computer-based exchange between the stakeholders.

Understanding the Importance of Data

In healthcare, data is often categorized as either clinical or administrative in nature. For the purposes of a RHIO, however, data is data. The only real question is whether the movement and use of the data will improve the delivery of healthcare for the community. RHIOs should focus on the value of transmitted data, rather than the type, transaction or format to be used.

A RHIO's main functions should be to identify the data, standardize it, package it, move it and then present it to each end user in a way that addresses its clinical or business needs. Following these basic principles of information management will form a solid foundation for a successful RHIO.

Identify the Data - First, the RHIO must identify the clinical and business needs of stakeholders that can be addressed through better access to data. Different stakeholders will have varying needs, and the data requirements of all stakeholders must be identified. For example, some data will be stored electronically, while other data must be converted from paper to EDI for transmission.

Standardize the Data - The RHIO should use existing standards such as HL7 and X12 for moving the data between stakeholders. Some standards, such as HIPAA, specify optional data elements. Successful RHIOs will incorporate the widest array of existing data elements.

Package the Data - Packaging affects the different ways that the standards are used to place the data. A current example is the use of NCPDP, ASTM and HL7 standards to handle the Continuity of Care Document. This has created a controversy over which standard to use. In this case, the RHIO would decide which standard that its stakeholders would use.

Move the Data – Each RHIO must establish a secure portal or other methodology that allows members to exchange data with one another. Many RHIOs will need to provide multiple options for stakeholders to connect using interoperability standards defined by the community. The standard must be open enough to allow all members of the community to participate in the network, yet secure enough to meet patient and community concerns for privacy as well as HIPAA security requirements. The RHIO should also incorporate procedures that allow each patient to specify how and by whom his or her data is accessed.

Present the Data – For data to support improved delivery of healthcare to the community, it must be usable by all stakeholders, large and small. In many cases, the RHIO will need to develop tools (i.e. optional software applications) to allow participation by smaller stakeholders such as individual physician offices. These tools will facilitate wider adoption and utilization of the RHIOs capabilities and need to be provided at a reasonable cost so that the smaller stakeholders find value in participating. The architecture must be open enough to allow large entities to manage the presentation in ways that will meet their integrated delivery network solutions.

Roles and Goals

Although key stakeholders in communities all over the country are coming together to form RHIOs, many are confused about where to begin. Defining the roles and goals of the RHIO in the community are important first steps to build on the basic principles of information management.

The U.S. Department of Health and Human Services lists three primary roles for RHIOs in the community:

- *Provide governance and serve as a trusted intermediary.*
- *Facilitate consumer interactions.*
- *Support the financial, organizational, legal, technical and clinical processes.*

These roles have been discussed at length in articles and papers. However, to be economically viable and sustainable, the RHIO must go beyond these three roles. Successful RHIOs must also incorporate the following roles and goals:

- *Educate the community.*
- *Connect the community.*
- *Develop a solid organizational foundation.*
- *Establish community standards for information exchange.*
- *Select the right vendor partners for information technology.*
- *Perform pilot projects.*
- *Act as a facilitator.*
- *Cut healthcare costs by 20 to 30 percent.*
- *Improve reimbursement process.*
- *Implement a comprehensive solution.*

Educate the Community

Each community stakeholder must understand the role of the RHIO and the benefits it offers to participants.

The role of the RHIO will change over the next 10 years in accordance with federal leadership. However, one role that will remain constant is that of educating the local community, including providers, health plans and employers. Each community stakeholder must understand the role of the RHIO and the benefits it offers to participants.

Providers – especially single and small group physician practices – will require education on the RHIO's function, technology and benefits. It is important that every physician office participate in a RHIO. If one provider is left out, then the RHIO will lack critical clinical information for that provider's patients. The RHIO must give providers the education they need to acquire and implement the technology. Otherwise, the provider may become confused by multiple vendors, each armed with compelling stories about its products. Worse, the provider could select a solution that does not integrate well with the RHIO.

Health plans need to understand the changes that must be made to the electronic processing of healthcare information. They need to know more about how providers work, so that the health plan can develop programs that better serve their customers. The RHIO can set a vision to direct initiatives such as real-time claim adjudication. The RHIO can pull together provider facilities and groups to participate in demonstration projects. The health plan needs to understand that a reduction in providers' administrative expenses will lead to a corresponding decrease in the health plan's expenses – and, eventually, to real savings in the overall costs of care.

Employers need to understand the role that a RHIO can play in improving the healthcare of their employees and controlling costs. Employees should understand how their use of

healthcare services affects the costs and quality of care. To facilitate this, the RHIO might give employers tools to educate their employees on the use of medical services.

Connect the Community

The RHIO must allow all of the healthcare providers and payers in the community to share information.

One of the most essential roles for the RHIO is to build community wide consensus for integrated health information exchange and interoperability. Only when the stakeholders start to talk about improvements for the entire community will the RHIO begin to reach optimal effectiveness. The RHIO must create a cost-effective model to allow all of the healthcare providers and payers in the community to share information when authorized and appropriate. Given the unique characteristics of each community, there is no "one-size-fits-all" solution. However, whatever form the RHIO takes, it must be community driven and it must include all of the stakeholders in the region, large and small. Each participating member in the RHIO must trust that the RHIO governing body will act in the community's best interest to improve the quality of healthcare. This is essential to create provider and hospital buy-in to the RHIO and to enable the model to get community wide support.

The ultimate success of the RHIO will depend on universal participation by providers and payers. If one provider is left out, then the RHIO will lack access to critical information that could affect an individual's quality of care. RHIOs must ensure that all information is available when critical, life-saving decisions are to be made.

Some existing RHIOs are set up and controlled by large corporations, which tend to think in terms of infrastructure that was designed and built for their needs and budgets. A RHIO designed only with the needs of these large entities may have rules and an infrastructure that exclude or discourage participation by smaller organizations such as individual physician offices.

Develop a Solid Organizational Foundation

To ensure long-term success, the RHIO must be built on the foundation of a solid but adaptive organization. This organization must be dedicated to improving healthcare in the community. When member organizations focus on what is good for the community as a whole, each of them will also prosper individually. This thought process is contrary to the natural course of business for each organization. Yet, it is amazing to watch the benefits within each organization when the quality of care improves for the community.

Selecting the right person to lead the RHIO is the most important factor in achieving organizational success. The leader sets the vision for the RHIO. To carry out this vision, the RHIO leader must understand the needs of the community as well as of each member organization. This person must also have the persuasive skills to bring all parties together.

Establish Community Standards

To protect the RHIO and its members, it must be a standard setting organization.

For a RHIO to become effective in a community, the RHIO must include 100 percent of the information exchange activities. A RHIO will also bring competitors to the same table for collaboration. Being a non-profit organization does not protect the RHIO from antitrust rules. Within the RHIO, competitors will collaborate. The collaboration should be based upon the development of standards. Competing organizations can work together for the development of standards under the American National Standards Institute. To protect the RHIO and its members, legally the RHIO must serve as a standard setting organization for its community or region.

In some ways, this function will change with the growing role that the federal level is assuming in establishing interoperability standards. These standards are more technical in nature, and will eventually replace the local RHIO standards. Until more national standards are established, each RHIO will need regional standards to facilitate successful interoperability.

Select the Right Vendor Partner for Information Technology

Choose a field-tested solution from a vendor with a track record of success in the demanding and complicated arena of a functioning RHIO.

Selecting the right vendor partner to assist in the deployment of a RHIO has a direct impact on success. When evaluating competing solutions, consider the following:

- *The RHIO architecture must meet both the clinical communication standards (which have yet to be determined) and the administrative standards from the Committee on Operating Rules for Information Exchange (CORE),*
- *The architecture should have the flexibility to process all types of transactions. Today, clinical information is generally transmitted using HL7 transactions. However, other functions in the RHIO can require NCPDP, X12, ASTM, XML and proprietary transaction formats.*
- *The solution must have proven scalability to handle ever-increasing volumes of data exchange. Currently, each patient encounter is estimated to generate a combination of 50 or more clinical and administrative transactions. This could increase geometrically as RHIOs transmit information about more and more clinical processes to a wider array of partners.*
- *The vendor must demonstrate a commitment to community partnership. Each community has unique needs that dictate variations in the delivery of healthcare. A vendor must demonstrate the willingness and capability to customize solutions to meet each community's needs.*
- *The selected system must meet Electronic Healthcare Network Accreditation Commission (EHNAC) certification requirements to demonstrate its ability to transmit information in compliance with HIPAA security standards.*
- *Choose a field-tested solution from a vendor with a track record of success in the demanding and complicated arena of developing and implementing a functioning RHIO.*

Perform Pilot Projects

The current healthcare system is so complex that it would be unwise to adopt whole-scale changes in procedures without first performing pilot projects. An immediate, large scale implementation may meet resistance because it does not give RHIO members time to get comfortable with the changes about to be deployed.

By contrast, pilot projects allow the community to see the benefits and to buy into the concepts before sweeping changes take effect. These projects also allow the RHIO and its member organizations to invest incrementally in development of the technology and standards needed to exchange information.

The goal of a pilot project is to prove that the members of the RHIO can work together to securely and effectively exchange information in a cost-effective manner. Each pilot project member must implement the standards, technology and procedures internally as well as become interoperable with other RHIO members.

Act as a Facilitator

Health plans and providers often have conflicting goals. The RHIO can act as a facilitator assisting both parties in understanding how change can benefit everyone.

For example, the pay-per-service model gives an incentive to providers to perform more services. Studies estimate that the healthcare industry wastes billions per year on tests that don't improve health, are redundant or are inappropriate for the patient's condition. The RHIO could, for example, work with both parties to support an administrative and reimbursement methodology that compensates providers for improvements in patient health, regardless of services provided.

Cut Healthcare Costs by 20 to 30 Percent

Improvements in quality of care are irrelevant if patients cannot afford to pay for care.

Reducing unnecessary healthcare costs ranks among the major goals of any successful RHIO. Improvements in quality of care are irrelevant if patients cannot afford to pay for even minimal care, as is true for a rising number of Americans. According to U.S. Census data, the number of Americans lacking health insurance stood at 45.8 million in 2004, an increase of 800,000 people over the number uninsured in 2003 (45.0 million).

Even those with health insurance are feeling the pinch. According to research firm Towers Perrin, employees are paying 64 percent more for healthcare than they spent five years ago. In that same time frame, employer costs have risen 78 percent — both far outpacing other inflation measures.

Under the current, disconnected system, Americans are fast approaching a point at which they must either accept a reduction in the quality of care or continue to devote a significantly greater portion of their disposable income to pay for care. Either outcome would have grave consequences, both to public health and to the economy.

Improve Reimbursement Processes

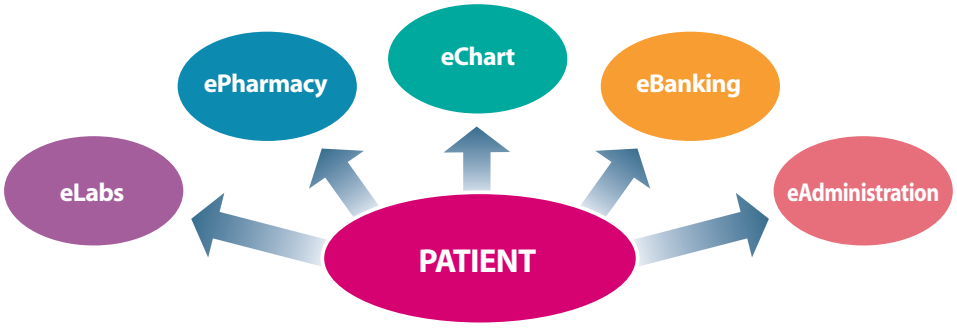
RHIOs must demonstrate how participation in the online community reduces operational costs and enhances revenue cycle performance, while expediting the exchange of information throughout the entire care delivery process. Improved provider reimbursement processes translate into fewer phone calls and lower costs for the payer.

HTP's experience shows that a comprehensive, holistic approach to exchanging both clinical information and administrative data yields a financially and clinically sound solution that can be implemented quickly.

Implement a Comprehensive Solution

In the end, the real costs savings and improvements in quality of care depend on the RHIO creating a comprehensive network that encompasses all touch points throughout the patient care experience, including clinical, pharmaceutical, administrative and banking processes. This network must include mechanisms for efficiently processing administrative transactions as well as sharing clinical data. A comprehensive patient-centric solution will ensure the acquisition of all necessary patient demographic data, the delivery of care and the complete payment for care.

Touchpoints of a Comprehensive Patient-Centric Solution



Mission RHIO:
Evolution of the First Successful RHIO

A few prescient state healthcare leaders saw the need to create an electronic architecture that would allow every healthcare provider to exchange data with every healthcare payer. Within a few years, these states have seen a substantial reduction in healthcare costs that benefits all stakeholders. Through secure electronic exchange of information, healthcare providers are able

With healthcare costs fully 25 percent below the national average, Utah has achieved an enviable return on its modest investment in UHIN.

to verify a patient's insurance eligibility, obtain pre-authorization for services, submit an accurate claim, and receive payment electronically – often within a week or less, and with a considerable decrease in the staff time needed to process claims. Insurance plans and other payers experience a corresponding reduction in the costs of claims processing. Patients obtain faster authorization for services and see far less paperwork.

As the creator of the information architecture and technology that powers UHIN, HTP, Inc. has developed a unique insight into the workings of an effective RHIO. HTP's experience shows that a comprehensive, holistic approach to exchanging both clinical information and administrative data yields a financially and clinically sound solution that can be implemented quickly.

The UHIN Model

The Utah Health Information Network (UHIN) has been recognized by the U.S. Department of Health and Human Services as the first successful RHIO. UHIN was created in 1992 to reduce costs, improve healthcare quality and access, and facilitate research by:

- *Creating and managing an electronic value-added network to link healthcare community participants in the state of Utah for the purpose of interchanging important financial and clinical information.*
- *Standardizing healthcare transactions and reporting, electronic interface development and communications services.*
- *Creating technical and business standards to allow interoperability.*
- *Conducting educational programs consistent with the community's needs to interoperate effectively while maintaining privacy and security.*
- *Providing charitable services that lessen the burden of government by providing data to help state agencies fulfill their responsibilities as legislatively mandated.*

This effort was initially focused on efficiency increases and administrative cost reduction so the entire Utah healthcare community, including consumers, would benefit. To support its goal of creating an economically sustainable system, UHIN began by creating an information architecture that used the HIPAA administrative transactions to exchange information. This approach could be implemented quickly and would begin generating a return on investment almost immediately.

Once the administrative component was completed, UHIN moved to performing clinical information exchange for Real Time Outbreak and Disease Surveillance (RODS) public reporting. They will also be using the system extensively for National Council for Prescription Drug Programs (NCPDP) claims.

Participation

In 2001, HTP began working with UHIN to create the information architecture and software tools needed for Utah's healthcare providers and health plans to exchange information. By 2005, 100 percent of the hospitals, laboratories, local health departments and mental health centers in the state of Utah were connected to UHIN. An overwhelming 85 percent of commercial claims are now paid within seven days. UHIN also connects 95 percent of the doctors and 90 percent of the chiropractors. UHIN is now beginning to work with the dental community as well.

The software that supports UHIN was designed in platform-independent modules to allow for easy deployment by providers, payers and UHIN itself. It was designed to:

- *Support fast implementation of the RHIO,*
- *Significantly accelerate the revenue cycle/reimbursement process,*

- *Support routing of both clinical and administrative transactions,*
- *Provide a platform for the application of common business rules,*
- *Supply a desktop software product for providers that allows them to create and manage the transactions with their existing proprietary practice management systems,*
- *Work with the community to tailor the system to meet the needs of all stakeholders.*

Because many single physician offices do not have sophisticated practice management systems, the UHIN architecture offered a product called UHINT to allow each provider to create and manage transactions to enable rapid deployment. This desktop workstation system allows for small provider offices to take advantage of the network with very minimal investment.

Privacy

The HTP software also includes a patient-driven privacy policy, allowing the patient to control what clinical information will be distributed through the system. The system's structure will allow for configuration by the patient to indicate that a specific healthcare provider's clinical information will be blocked from moving through the network. The HTP system's patient-driven privacy policy was part of the process for UHIN to become EHNAC certified.

Financing

Utah's health information network is self funding and has been built without significant government grants.

Utah's experience shows that an electronic healthcare information network that handles administrative transactions and is paid for by payers and providers via modest subscription and transaction fees is a very effective way to fund a regional health information network. Utah's health information network is self funding and was built without significant government grants. After building a reliable system to move administrative healthcare transactions (i.e. claims, benefit eligibility, and electronic payments), UHIN is now expanding to handle clinical transactions including electronic pharmacy prescriptions, medication history records, lab results and discharge notes. With more than 3 million transactions handled per month, UHIN has sufficient revenue to grow its services and handle more types of healthcare electronic information transfers.

With healthcare costs fully 25 percent below the national average, Utah has achieved an enviable return on its modest investment in UHIN.

HTP and RHIOs

As the technology partner of the Utah Health Information Network, HTP developed a suite of software products that enabled all healthcare providers and payers to electronically exchange clinical and administrative data throughout the state.

HTP has developed the UHIN modules into three software packages that work together to quickly connect all members of the RHIO community into a functioning network. The products include ***HTP Transaction Manager™*** for payers, ***HTP RevRunner™*** for providers and ***HTP MedRunner™*** for RHIO administrators.

HTP provides the tools and a platform to make the RHIO a functioning network to serve the community. Combined, these tools help the RHIO to:

- *Reduce costs by 20 to 30 percent across the healthcare system.*
- *Facilitate the movement of healthcare information for a more interoperable, integrated system.*
- *Share clinical information – providing the data needed to save lives!*

About the Author

Fred Richards is the cofounder and chief technology officer for HTP, Inc. A former Chief Information Officer of Nationwide Insurance HMO, Richards has almost 25 years of experience in healthcare administration and insurance systems information technology. Richards designed the information architecture that has powered the success of the Utah Health Information Network (UHIN).

He has chaired national healthcare EDI standard-setting organizations in establishing XML standards for the HIPAA transaction suite and participated in many of the X12N workgroups defining the HIPAA transactions. He speaks frequently to such groups as the Workgroup on Electronic Data Interchange (WEDI).

Richards plays an active role in the Committee on Operating Rules for Information Exchange (CORE), which designs national rules for exchanging healthcare transactions. He has authored two books on EDI healthcare claims transactions. His article, "Five Steps to Transforming the Claims Management Cycle," appeared in the May 2005 Group Practice Journal. A certified industrial engineer, Richards holds a Bachelor of Science degree in engineering and an MBA.

Richards heads up HTP's consulting services group. He has consulted with emerging RHIOs in seven states.

About HTP, Inc.

HTP develops award-winning software that improves efficiency, profitability and patient satisfaction for hospitals, insurance companies, managed care organizations, third-party administrators and Regional Health Information Organizations. HTP software is used by 227 hospitals and 25 health plans in 25 states. Notable customers include Ohio Medicaid, The Midland Group, OhioHealth, Redlands Community Hospital, The Ohio State University Medical Center and the Utah Health Information Network -- the nation's first successful RHIO..

About UHIN

The Utah Health Information Network (UHIN) is a broad-based coalition of health care insurers, providers, and other interested parties, including State government. UHIN participants have come together for the common goal of reducing health care administrative costs through data standardization of administrative health data and electronic commerce (EC). Similar EC transaction processing has been a reality in the fields of business, banking, and transportation for over two decades. It is appropriate in this time of health care reform that UHIN bring the same efficiencies of EC to the health care industry. UHIN has a centralized health data transaction system. UHIN is the hub for this system.

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