Evaluating a Potential HIE Opportunity

From the
HIMSS Guide to Participating in HIE

HIMSS HIE Guide Work Group
November 2009
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Based on the last data set provided on the HIMSS Analytics Web-based State Dashboard, there are at least 475 HIE-type projects and RHIOs located around the nation, and many other initiatives around the world.¹ This resource is no longer available. Most of these HIEs are driving the application of technology to help providers:

- Improve patient safety by reducing medication and medical errors;
- increase efficiency by eliminating unnecessary paperwork and handling;
- provide caregivers with clinical decision support tools for more effective care and treatment;
- eliminate redundant or unnecessary testing;
- improve public health reporting and monitoring;
- engage healthcare consumers regarding their own personal health information;
- improve healthcare quality and outcomes; and
- reduce health related costs.

As these HIE efforts mature and grow, more and more providers are faced with the question of whether they should join a HIE effort or an existing RHIO. The recent federal stimulus package, which sets HIE as a priority, will only spur this growth as providers make use of the funding to adopt electronic health records and share data with other providers.

This section, along with the HIE Evaluation Checklist in Appendix A, will help organizations define and understand their value proposition, or perceived benefit, from participating in a HIE and guide them through the decision-making process. It will guide readers as they identify the synergy between their organization and other participants by outlining questions that should be asked before deciding to participate and allocate resources. The objective of any evaluation is to ensure a shared vision and better prepare both organizations for transition process.

Understanding the Goals and Philosophy of the HIE

The initial questions asked should be aimed at determining whether there is a cultural fit between the ultimate goals and vision of both organizations. In the early stage of evaluating the HIE opportunity, it is important to identify common or shared elements between your organization’s and the HIE’s mission, goals, priorities and resources.

- Ask to review organizational documents (i.e., the charter, business plan, organization chart) that describe the mission, vision and/or philosophy of the HIE, as well as, any goals and objectives that may have already been established. Also review other documents, such as technology specifications, presentations, proposals and papers that describe how the HIE expects to reach its goals and objectives. The latter are sometimes developed after the organizational documents and often reflect more refined strategies or changes in approach or tactics.

¹ http://www.himss.org/StateDashboard/
• Determine whether the needs of patients, physicians and others providers have been addressed and the priorities balanced against the identified needs. Determine whether this HIE initiative will serve the entire population, or only specific groups, before expanding across the community.
• If the HIE has already adopted a model or approach (as described in Section 3) to address interoperability, does it fit with the expectations of your organizational objectives? If one hasn’t been selected, how will your organization participate in this decision-making process? How will you uncover the value proposition that the HIE’s model will offer to your organization, other stakeholders and the community as a whole?

The HIE vision is to readily share clinical information electronically between providers, capture and analyze clinical information for improved decision support and public health reporting, and support health and wellness information for use by consumers. However, at this early stage the scope and complexity of each HIE will vary and new participants will need to understand whether the HIE will work towards incremental improvements by focusing on one or two initiatives at a time or using a “big bang” approach to push for a radical or massive transformation. If it is the latter, is your organization ready to make a big jump, too?

• Talk to the HIE’s current members and representatives from organizations planning to join. These will be your business partners going forward, so it is important to know diverse perspectives are represented and stakeholder representatives are prepared for cooperation and collaboration. Also identify those key stakeholder organizations that haven’t yet joined or have refused. It is important to explore the reasons why and identify potential barriers or issues that may arise for your organization.

Widespread HIE will require a public-private collaborative approach. It is important to evaluate the potential competitive barriers that may exist for your organization with these business partners. If barriers do exist, work with these business partners and your organization to overcome these for the important work that lies ahead.

More and more we can expect to see multiple HIE initiatives operating in a community as the national health information infrastructure is built out.² If there are multiple efforts, determine whether they will compete with or compliment the work of the other(s).

• Based upon your review of information provided by the HIE and conversations with stakeholders and others, is there alignment between the goals and philosophy of the HIE and those of your organization? If so, you now need to turn your attention to whether your organization has the resources and is prepared to participate in an HIE.

Understanding to What Your Organization will need to Commit by Participating in an HIE

Participation in an HIE is a serious undertaking. It is important to determine whether your governing body is ready for a significant commitment of resources. This may include participation or subscription membership fees, upgrade(s) to IT systems and infrastructure and


access to capital. It may involve time commitment of several key positions/departments such as the CFO, CEO, CIO, CMO, compliance officer, information technology, finance staff, compliance staff, health information management staff, medical staff, as well as other clinical departments. It may also result in some lost revenue and productivity due to changes in workflow processes and during training and implementation periods.

Participation in an HIE requires written formal agreements between partner organizations (business associates), data users and data providers. These agreements describe the sharing of clinically relevant information with the HIE, requirements, terms and the responsibilities of each party.

- Your organization will need to be prepared to enter into an agreement that fits with your function in the HIE.
- If the HIE doesn’t already have business associate, data provider and/or data user agreements, they should have one developed before the first patient data is ever exchanged.

**Understanding the Prevalence of Nationally-Accepted Standards**

An effective HIE will be based upon use of established standards and certification which helps facilitate this migration process and establish trust in all stakeholders. HITSP has selected interoperability standards to support a specific set of use cases, and is working to generalize those selections for additional use. The Certification Commission for Healthcare Information Technology (CCHIT) has defined a process confirming that a system or component complies with its specified requirements and is acceptable for operational use. CCHIT certification has been divided into two separate processes, the development of certification requirements and the practical certification by an authorized organization using previously developed certification requirements.

The HIE and its participant organizations will need to establish and fulfill regulatory, functional, technical and other mandatory requirements. The EHR systems connected to the HIE will need to possess the same level of functionality, security and privacy protection.

The reliability and validity of the data is important to ensuring improved patient care and minimizing the risk of errors. Review the HIE’s policy on matching demographic data and determine the number of data points used to produce positive matches.

**Understanding the Value for Users of the HIE Information and Data**

As research indicates, most HIE participants are looking for secure IT systems that offer complete documentation and charting capabilities, computerized practitioner order entry, digital images, medication administration and ePrescribing, decision support and a single sign-on. Assess the HIE’s ability to incorporate consumer, provider and other stakeholder interests into the development of their business plan. Without having direct knowledge of specific interests, the HIE may be evolving into a community solution that will not be widely used.

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3 [http://www.cchit.org/about](http://www.cchit.org/about)

The existence of the technology and data exchange capabilities will not automatically generate actual value and user satisfaction. For example, a Finland study at three hospital districts looked at usability and benefits. The federated information system consists of a record locator service as a central reference database containing links to patient data stored in their legacy systems. Provider access was through Web browsers and patient information included visits, critical data laboratory results, images and reports and referral and discharge reports.

Results from this study demonstrate the importance of user testing and training. More active users reported definite advantages and tended to be more satisfied than less active users, however, 41 percent of the physicians had difficulty logging in and 62 percent had difficulty using links of the locator service or finding patient information from the legacy systems.

- Ask the HIE leaders and physicians about the usability of the system and usefulness of the information and/or data provided, if it is already being tested or has been fully implemented. It should be fairly easy to log on, navigate through the system and find data and information. Users should also test the quality of the data to ensure it is accurate, timely, and complete. Your organization should also confirm that the same data/information is not already and more easily available elsewhere for less cost.
- Identify the interface capabilities and whether there are limitations with legacy systems, which are older systems that may have difficulty communicating with newer ones. Determine if your organization or other participating organizations have legacy systems required to interface with the HIE and whether there are plans for upgrades to enable the sharing of clinical information.
- Identify the data sources that are not currently available to the HIE, such as independent laboratory or pharmacy, and plans for adding this information in the future.

**Understanding the Economics and Financial Sustainability of the HIE**

Identify the specific benefits of the HIE and to whom they accrue. Misalignment of incentives, especially with payment and competition, will threaten the long term stability of the effort. For example, one of the most widely accepted key benefits of an HIE is the reduction in duplicate or redundant ancillary testing, but this usually results in a reduction in revenue for the hospital and some clinics. While the reduction may be beneficial for some facilities who are working to reduce test volume due to staff and facility limitations, others will see the real benefit (cost savings) accrue only to the payors, unless steps have been taken to ensure savings are shared by all participants and/or investments are proportional.

Australia recognized that the largest component of the costs associated with implementation is most often absorbed by providers with a fairly even split between the replacement costs of their existing electronic medical records and the costs of building interfaces.

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• Determine whether your organization’s participation in the HIE requires a return on investment (financial or otherwise) or if participation is viewed as a cost of doing business or in support of the public good. Understand the accrual of benefits, to whom they accrue and in what proportion. If some stakeholders accrue a significant proportion of the benefits, ask if they share proportionately in responsibility for the costs.

• Identify past and future funding streams, such as grants, transaction fees, service fees, subscription fees, licensing/maintenance fees, member dues, etc. What is the estimated cost to your organization and is there an expected financial benefit to your organization? Is your organization prepared to make the necessary commitment of internal resources, such as upgrading IT systems and infrastructure?

• Determine the needs that are being addressed or services provided to the community, both currently and planned for the next six to 12 months. Does the HIE bring information to the point of care? If it doesn’t, determine whether there is an anticipated or planned timeline to do so or how the technology adds value to the HIE and for which stakeholders.

Some benefits are difficult to quantify and value, but they are equally, if not more important, to the economic and sustainability of the HIE:

• Improved quality outcomes.
• Increased patient safety and satisfaction.
• Improved staffing efficiency and productivity.
• Reduced liability.
• Disaster recovery capabilities.
• Enhanced reputation in the community and increased goodwill.

The important question here is does your organization buy into the stated benefits and expect to realize value by participating in this HIE? If so, is your organization willing to pay their fair share to support this effort.

Understanding Risks

The Australian study also recognized that the greatest risk was not achieving value from interoperability, but whether or not rigorous standards are developed and implemented.

• Review participation, data user/sharing and/or business associate agreements to determine the assignment of liability and the potential impact upon your organization. Consideration should be made to who the other HIE participants will be and whether there is a downside to joining or not.
• Determine if your organization is joining as a participant or will have a seat on the governing body. If the latter, your organization will need to be especially cognizant of the fiduciary responsibilities.
• Determine whether the HIE has defined how success and/or failure will be defined and measured. Understand existing or potential threats to success and look for any signs of weakness, such as, lack or waning of interest by other participants, misalignment of
The cost of participation in an HIE will most likely cause some amount of competition for internal resources (capacity, skills, funding, etc) and may impact other initiatives.

- Determine whether your participation in the HIE will result in delays, re-work or discontinuation of other projects and identify those that might be adversely impacted or threatened.

**Understanding Applicable Regulations**

The exchange of private health information—whether on paper or electronically—is a delicate matter and closely regulated. The speed of the Internet increases concerns about the potential of unintended disclosures and misuse. As a result, a careful analysis of the HIE’s efforts to comply with regulations, including HIPAA, ARRA and state laws is needed prior to your organization becoming a member of the HIE. While the current HIPAA regulations do not adequately govern HIEs, new regulations and revisions are expected to be released.

- Involve your compliance and privacy officer and/or legal counsel early in the evaluation phase. Identify the safeguards that are in place to ensure privacy and security and understand the process used for reconciling and reporting breaches.

This white paper does not include a detail discussion around the privacy rules and regulations.

**Understanding Leadership and Governance**

As a collective group, the governing body is responsible for accountability, authority and oversight of the entity.⁶ Many HIEs start with a project steering committee and later identify the need to establish a formal organizational and governance structure, a RHIO, as the number of partners increase, clinical and technology plans are brought into focus and implementation nears. The strength of the HIE’s leadership and organizational structure is an important indicator of success. As a result, leaders should have a shared vision and represent various disciplines, cultures and perspectives to avoid narrow views. The leadership, and/or governing body members, should have balanced representation and strengths (clinical, technical, administrative, financial, management, legal). They should be effective leaders and champions who can build trust, facilitate the creation of shared vision and goals, engage stakeholders, communicate and most importantly be accountable to the community as a whole and not to their individual interests.

As the HIE progresses, it should begin to function more like a business and less like a collaborative project.

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- Review the flow of control and decision making and ask for a written board profile, job descriptions, and organizational chart to determine whether the structure seems appropriate.
- If your organization has a seat on the governing body, be prepared to actively participate and accept fiduciary responsibility for establishing policy and oversight.
- If your organization joins as a member or participant of the HIE, understand the process(es) for communicating the needs of your organization and influencing policy and oversight.

**Understanding the HIE’s Maturity**

The maturity of the HIE may play a significant role in the decision making of how your organization may wish to participate. Your organization may want to be in the front end formation and invest fairly substantially in terms of resources to form, guide and build the HIE, or your organization may want to wait until the HIE is already formed and operational before they decide to invest in it. Regardless of the organizational goals, one must understand the typical stages that most HIEs are going through from concept stage to a fully functional, self-sustaining operation.

The stages can be divided into finer classifications but typically they include:

- **Concept.** In this stage there is a recognition that an HIE can help improve the quality of care and reduce healthcare costs for its community (local, state, region, etc). Generally, a group of stakeholders identify this need and embark on research to determine the validity of its hypothesis. Once the hypothesis is viewed as credible, they are ready to move into the next stage.
- **Formation.** At this stage the stakeholders who developed the concept move toward getting organized. They expand the membership, develop a structured committee complete with a defined charter, they ask for membership participation, and then they move to create a business plan which should include: what the HIE business will be, what services to be offered, the funding mechanism, the technologies required to support the business, the marketing program and the governance and organization structure. Once a solid business plan exists, the HIE is ready to move into the next stage.
- **Fundraising.** By this stage an agreed upon business plan exists and funds are raised to run the operation of the HIE. There are many models across the country being used to raise capital to start these operations including: grants, membership fees and donations. Once the initial capital has been raised, the HIE is ready to move into the next phase.
- **Start-up.** In this stage the initial team to run the operation is put into place and the technology secured, marketing is started and the operations can begin. The more successful business models include running the operations as if it were a true business operation and not an outgrowth of a development project. Once the start-up operations has benefits accruing, revenue flowing, and new members are involved beyond the initial stakeholder set of members, the HIE is ready to move into the next stage.
• **Growth.** At this point the marketing efforts of the HIE are fixed on growing the business. The goals of the HIE to improve quality of care and reduce healthcare costs are achieved when the majority of the stakeholders in the community are part of the HIE. At this point, depending on the business plan revenue stream (i.e., subscription, transaction, grants, donations), the HIE should be able to run the operations successfully.

• **Sustainability.** The operation is able to sustain the growth, expand its technical capabilities and services and add value into the community. Once this stage is reached, the community should be able to see the tangible results of the HIE operations. The goal of any HIE should be to reach this stage.

As the HIE gathers the information focused on these areas, an understanding can be developed as to where the HIE fits along the continuum and what work is left before the initiative is fully implemented.

Ultimately, the HIE initiative should mature into a formal business venture with strong oversight. If the initiative is not progressing through the typical stages of maturity, it may be a sign that the viability of the business plan is in jeopardy. At this point, it can clearly be seen how close the HIE is to reaching the ultimate goal of connecting with the National Health Information Infrastructure (NHII) later called Nationwide Health Information Network (NHIN), which is:7

- An initiative set forth to improve the effectiveness, efficiency and overall quality of health and healthcare in the United States.
- A comprehensive knowledge-based network of interoperable systems of clinical, public health, and personal health information that would improve decision-making by making health information available when and where it is needed.
- The set of technologies, standards, applications, systems, values and laws that support all facets of individual health, healthcare and public health.
- Voluntary.

The NHIN is *not* a centralized database of medical records or a government regulation, but rather a way of connecting an HIE in a community. It is needed to:

- Improve patient safety (alert for medication errors, drug allergies, etc).
- Improve healthcare quality (includes the availability of complete medical records, test results and x-rays at the point of care, integrating health information from multiple sources and providers, incorporating the use of decision-support tools with guidelines and research results, etc.).
- For bioterrorism detection (NHIN will enable real-time aggregation of health data to detect patterns).
- Better inform and empower healthcare consumers regarding their own personal health information.
- Better understand healthcare costs.

Local, regional and state-wide HIE efforts wishing to connect to the NHIN must adopt technologies that meet established standards and coordinate efforts to exchange information within and outside of their network. The ultimate goal is to move away from silos of information (whether in paper or electronic) and toward portable health information that is available at the point and time of care each and every time.

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