Despite the strategic importance of a health information exchange to facilitate a health care organization’s move to patient-centered accountable care, most health care providers—especially physician organizations—remain disconnected, isolated silos of information. Less than one-fifth of hospitals and only 3 percent of ambulatory practices are connected to an HIE, according to the *Annals of Internal Medicine*. A relatively small number of HIEs have attracted the critical mass of paying provider participants necessary to achieve a sustainable business model. Of the 73 operational HIEs in 2010, 14 percent had merged or ceased operations by 2011, according to data from the eHealth Initiative. These statistics suggest leaders at healthcare organizations around the country lack strategies for sustainable investments in HIE.

Providers’ reticence to commit to an HIE is not surprising, considering the central role it would play to an organization’s care transformation efforts and the difficulties inherent in switching out a major infrastructure component if the strategy went awry. The HIE market’s nascent state coupled with the uncertainty of the financial viability of many HIE organizations raises the stakes of a healthcare organization’s decision to implement an HIE infrastructure, contributing to the inertia.

The necessity to choose between two distinct models of HIE organization and development further complicates efforts to forge an HIE strategy. When the hospital or physician organization decides to evaluate its options, leadership is faced with two alternatives: (a) invest in (or start) the local community’s privately-funded HIE initiative or...
(b) wait for a regional or state-wide, publicly-funded HIE to arrive. Here, we present a case for why community-based HIEs are the preferred choice, providing a framework of critical success factors for use by healthcare executives to evaluate their options. Our analysis also suggests publicly-funded regional and state-wide HIEs have an important, yet different, role to play in growing the HIE market.

Private vs. Public Funding

As the HIE market evolves, two emergent models prevail. “Private HIEs” are concentrated in a single community and its surrounding area. Typically they are sponsored by local healthcare organizations from the private sector. These community-based HIEs typically raise capital from participants to implement a narrow set of services in a relatively short period of time. Spokane-based Inland Northwest Health Services and Sandlot, a subsidiary of Forth Worth-based North Texas Specialty Physicians, are two prosperous community-based private HIEs. In contrast, “public” HIEs are chartered with covering a large region or a state involving many stakeholders and obtain most funding from government sources. The Utah Health Information Network and HealthInfoNet (Maine) are two examples of public HIEs. The Nebraska Health Information Initiative, which began as a private HIE and is evolving into a state-wide public HIE shows that clearly labeling HIEs as one model or the other is not always possible. However, the community-based private HIE structure has clear advantages.

Private HIE Advantages

Steady growth and financial viability – measurable indicators of success – are signals from a handful of the more mature HIEs that they are here for the long-term. Recent studies of operational HIEs from a number of different research groups reveal common success factors in successful HIEs. Four big success factors are: (1) a deep commitment to a shared vision among stakeholders, (2) a steady flow of funds for development and operations obtained from stakeholders in the private sector, (3) physician engagement at every level of the HIE, and finally (4) a system model that positions the HIE to meet the needs of accountable care.

Private HIEs are becoming operational at a significantly faster rate in comparison to public HIEs, according to KLAS Research. Our evaluation of private HIEs helps to explain why this is the case, by highlighting the advantages of the private organization structure.

Success Factor 1: Shared Vision

Health information exchange in the U.S. is a nascent business. It is characterized by unproven business models, immature standards (business, legal, and technical), and scant evidence of long-term, sustainable value. Magnifying these challenges is the complex, multi-year effort required to achieve an operational HIE. In this environment, an HIE organization’s leadership must take a long-term view while building a team culture of innovation. The cornerstone of innovation is a deep commitment to a shared vision among stakeholders. In our view, private, community-based HIEs are more likely to be incubators of innovation compared to a larger-scale publicly funded entity.
The genesis of a private HIE typically occurs when a small group of stakeholders mobilize to collaborate due to the common and immediate needs to exchange data. For example, Inland Northwest Health Services was formed by two competing health systems in the Spokane, Washington area. Leaders there recognized the potential reduction of healthcare costs by sharing clinical results electronically and developing a community-wide health record for their patients. In Texas, a large Independent Practice Association teamed with providers in the Fort Worth community to implement an HIE with the goal of reducing medical costs of patients being cared for under Medicare Advantage capitated arrangements. The providers shared a singular vision: reduced costs associated with unnecessary duplicate tests and preventable re-admissions by delivering a shared electronic patient care summary to physicians at the point of care.

The stakeholders of these private HIEs initially agreed on a shared vision that guided both the development and the execution of a small set of services, which successfully advanced the organizations toward their visions of lowering costs. Achieving a deep commitment to a shared vision and narrow set of priorities would be extremely difficult, in comparison, if the group of stakeholders were the large, diverse group that is characteristic of publicly funded HIEs.

**Success Factor 2: Private Funding**

HIEs receiving capital for business development and fees for services from private sector stakeholders are more likely to be financially viable compared to their publicly funded counterparts. Participants with a financial stake in the HIE will naturally be more motivated to ensure its success. Financial support is typically tied to the HIE achieving specific goals supporting the shared vision, fostering an entrepreneurial and performance-focused organization. Access to private funding also helps the HIE to avoid common pitfalls of using government funds for operations. Such reliance on a funding source with an arbitrary end date may not reflect actual business needs, and conditions for use that distract from the core goals to advance the HIE’s shared vision. With access to capital from stakeholders, private HIEs can be flexible in their pursuit of government funds, choosing grant opportunities that support the HIE’s strategic plan and allocating grant awards to non-operational activities, such as service expansion.

**Success Factor 3: Physician Engagement**

Active engagement of physicians at all levels of the HIE is a crucial element of the organization’s success. Physician involvement in strategic planning, design, workflow development, and continuous feedback regarding clinical value is fundamental to the HIE’s growth dynamics. Improved workflows lead to more physicians using the exchange to share information, increasing the HIE’s value. "Non-connected" physicians in a referral network will become aware of the improved communications among the physicians who are using the HIE. They will be compelled to adopt HIE into their care delivery. When physicians are driving adoption of the HIE by their peers, the HIE is poised for more rapid growth and success.
Gaining the commitment of the community’s physician leaders to develop and promote the HIE is a time-consuming process requiring grass-roots advocacy involving one-on-one interactions and leveraging established relationships. Because of this critical physician role, local medical societies and independent practice associations are vital stakeholders in successful HIEs across the country. For example, local medical societies are represented on the boards of directors of HIEs in the U.S. recognized for their growth and sustainability, such as the Rochester (N.Y.) RHIO. In Rochester, the county medical society plays a leadership role in promoting the service to community physicians, according to the National eHealth Collaborative.

In other examples, the Taconic (N.Y.) Independent Practice Association and North Texas Specialty Physicians, a 600+ physician IPA, took the lead in forming health information exchanges in their communities. In addition to providing financial resources, these IPAs contribute to the success of their respective HIEs by providing access to expertise in healthcare quality and safety, clinical workflow, and practice operations. These four core competencies are vital to physician adoption efforts. In no other circumstance is the premise “healthcare is local” more relevant than in the evolution of community HIE. Achieving the physician engagement necessary for a HIE to be successful can most readily (and practically) be accomplished at the local level with physicians stakeholders from the private sector leading the physician recruitment effort.

Poised to Support Quality

A shared vision establishes the foundation for building and sustaining a solid framework of trust for the private HIE. The shared vision and commitment to the local community provide the environment needed to develop and endorse a robust, transparent data use agreement. Similarly, policies and mechanisms for patient consent, user authentication, and distribution and use of patient information are developed with an eye on the HIE’s business goals. Furthermore, the private HIE can choose to avoid the complexities associated with exchanging data with government agencies subjected to security requirements beyond HIPAA and state provisions.

This community-based framework of trust enables the implementation of a central data repository or community health record for use by the HIE’s participants. HIE organizations must expand their portfolios to include services supporting population analysis and quality reporting among other types of online analytics to be attractive to accountable care organizations seeking a solid health information technology infrastructure. This requires capabilities only technically feasible with a centralized data architecture, such as normalized data and high performance queries. For example, Indiana Health Information Exchange, which features a centralized cluster of standardized “data vaults” was one of the first HIEs to deliver disease registries and quality reporting to physicians; more than 1400 physicians use the service, according to the organization’s annual report.

Public HIE Role
A private structure is clearly the best vehicle for building a financially viable HIE that meets the diverse needs of a community. However, the structure of the private HIE also reveals its limitations. The need for the private HIE to generate fees from participants early in its life cycle creates a barrier to serving rural communities with sparse populations of providers unless the geography contains an urban core, such as exists at the Rochester RHIO. Additional barriers exist if the private HIE lacks the expertise and resources needed to harmonize different data exchange standards.

Public HIEs serve a vital role in bringing data exchange to rural communities and driving adoption of the nationwide health information network (NHIN) standards and services. Statewide HIEs in locations with large rural populations and access to government funds are poised to concurrently pursue these goals. For example, the Nebraska Health Information Initiative (NeHII), with 1,700 provider participants across the state, is working with the U.S. Center of Disease Control and Prevention to transmit quality data via the Internet. They are able to share data by using the Nationwide Health Information Network standards and services. Likewise, the Utah Health Information Network, which is also enabled by the NHIN, will soon give rural healthcare providers the ability to access veterans’ health records. In both cases, the HIE leadership aligned stakeholders’ goals with these government-sponsored opportunities, which required use of the NHIN to participate.

As market pressures build for healthcare leaders to build accountable care organizations, pressure also mounts for execution of a sound HIE strategy. Despite the uncertainties of the HIE landscape, the path to a sound, long-term HIE decision is clear. Leaders of health systems need to collaborate with their physician networks and other healthcare providers in their community to build an HIE that features a deep stakeholder commitment to a shared vision, private funding that is linked to achievement of goals to advance the shared vision, extensive engagement of the physician community, and a system architecture that positions the HIE for the future.

Government officials who are responsible for the oversight and funding of public HIEs have an opportunity to strategically allocate capital and resources to complement private HIEs’ activities. By targeting markets where a private HIE is not economically feasible, by fostering the adoption of NHIN standards and services, and by facilitating connectivity of private HIEs to government entities via the NHIN, synergies emerge from the growth of both types of HIE models. Maximizing these critical synergies will sooner achieve the comprehensive level of HIE coverage that represents the fundamental objectives of the NHIN.