Aligning HIE: Model to Organize Networks on Core Principles, Collaborative Activities

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An HIE model developed in Florida leverages local and regional networks and offers a flexible, scalable framework that aligns them with national health IT and exchange priorities.

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The HITECH provisions of the American Recovery and Reinvestment Act have raised a national groundswell of interest and activity in health IT and health information exchange (HIE) throughout the nation. IT is taking on a key role in national health policy. States require a coordinated plan to encourage the adoption and "meaningful use" of electronic health record (EHR) systems in a manner that directly benefits patients, providers, agents, and advocates.

The model described in this article offers a unique framework at the local level that is currently missing from most national and state initiatives.

The model aligns with the national commitment to healthcare reform and economic stimulus, facilitates IT adoption by all healthcare providers, and promotes meaningful use of these systems. It describes core principles and collaborative activities that serve as the local building blocks for scalable, interoperable health information networks across states.

Leveraging Local Networks

Health IT adoption among healthcare providers must improve patient safety and population health; increase efficiency of healthcare delivery with faster diagnoses and treatment; facilitate better utilization of healthcare dollars spent; and connect patients, doctors, and ancillary services with current, clinically relevant information at the point of care.

The model described here seeks to enable these results by working with existing resources and local leaders, providing interstate and intrastate linkage, facilitating problem solving, and increasing health IT and HIE activity in all regions of a state in a cost-effective and meaningful manner. Its formulation was based on a community healthcare network scalable to a state level.

The model helps states strategically plan to connect local efforts with national priorities and initiatives by identifying goals and objectives that can be incorporated into a statewide baseline. A key point in the method is embracing the reality that there will be both cooperative and competing strategies on how to effectively achieve objectives.

In fact, the overall health IT quality offered across the state can be enhanced by identifying these competing strategies and incorporating them into a statewide plan through a collaborative coalition. As competing strategies align with the core principles and collaborative activities, comparable metrics will become available for the model's continuous improvement.

Background

The Collaborative Model was developed through a voluntary effort led by the Big Bend RHIO of Florida. Contributors have a successful track record of improving healthcare delivery through utilization of health IT and HIE across the state.

The model was started by leveraging the expertise of key stakeholders from the RHIO, which consists of public and private hospitals, rural hospitals, and physician practices. The goal was to develop a vision that represents all facets of healthcare, including physicians, nurses, PAs/ARNPs, hospital administrators, emergency medical services/trauma care providers,

community health workers, children's healthcare providers, medical schools and higher education institutions, interest groups representing consumers, medical and health profession students, social service workers, state and local government employees, professional advisors, professional associations, policy makers and government workers, writers, and researchers.

The model has subsequently been adopted, in part or in full, by three additional communities in Florida. It documents the experience and proven success in providing a practical starting point from which to move forward toward shared goals.

A Scalable, Flexible Framework

The Collaborative Model begins by identifying core principles, collaborative activities, and key objectives that form the foundation for efficient, effective, and sustainable health information networks across one state.

More than 90 percent of healthcare is sought and delivered locally, making it imperative that reform is locally endorsed, implemented, and measured for effectiveness. The most efficient way to achieve immediate outcomes is to focus on exchanging healthcare data through the existing patient referral patterns in local communities. A subsequent strategy will evolve for effective and sustainable interoperable networks statewide.

These core principles and collaborative activities are then overlaid with statewide goals, objectives, and strategies as a template to create a comprehensive plan for health IT and HIE.

The proposed methodology allows for a flexible plan that evolves as state and national expectations for health IT develop, while providing a focus on what works for healthcare providers at the local level. It can bring on new objectives while staying in balance with the known factors for successful results.

As a result, a dynamic process emerges that encourages progress reports and outcomes analysis and allows for continuous improvement by adjusting objectives and strategies and refining the collaborative activities as best practices and technologies are implemented and measured.

Additionally, the methodology provides a process to continuously improve best practices by adding, modifying, or removing objectives and strategies and refining the collaborative activities as new best practices emerge.

The model is vendor neutral and can be employed with any software and technology infrastructure.

The illustration below overlays the model's nationally aligned core principles and collaborative activities as they relate to regional (or local), state, and national health IT and HIE initiatives.

Core Principles

The four core principles are a constant in the model. They are interwoven into all of the collaborative activities and then subsequently carried out in the various objectives and strategies outlined in the plan. These components line up with the requirements of the Nationwide Health Information Network and other national efforts surrounding healthcare reform.

Quality Patient Care and Timely Access

Quality of care must be the primary objective of all health IT and HIE models. A poor delivery process due to the lack of coordinated systems is the root cause for a significant portion of quality of care issues. Measurable improvements in quality of care include patient perception, improved values, better outcomes, reduced errors, and increased participation in a better process.

Quality is also measured in the speed, ability, and efficiency with which services are delivered. Moreover, quality patient care reduces morbidity and ultimately saves lives.

Quality is further defined as error reduction or avoidance, and for this reason technology solutions should ensure that patient history and patient data are accurately documented and securely transmitted in ways that avoid repeated human transcription. Examples of tools that support improved quality include systems that allow improved information access, interactive decision support tools, integrated systems, and aligned incentives.

Disaster Recovery and Business Continuity

Emerging EHRs and HIE will significantly improve the ability to protect and recover patient data. However, as electronic capture and exchange of patient records become critical over the next two to five years, adequate recovery systems must be implemented upon initial deployment of any EHR or HIE. Plans must address redundancy and recoverability to comply with statute and legislative requirements along with the need to exchange data regionally and nationally.

Disaster recovery planning is really a subset of a larger process known as business continuity planning. It can include planning for resumption of applications, data, hardware, communications (such as networking), and other IT infrastructure that could adversely impede a provider's ability to deliver accurate and timely essential services or information needed for patient care. A true business continuity plan additionally considers non-IT related aspects such as key personnel, facilities, crisis communication, and reputation protection.

Managed Costs and Coverage

Measuring quality and cost at the community level through local HIE could pinpoint examples of misuse and overuse of resources that would not otherwise be identified. Bringing these instances to light can help initiate activities at individual practices that lead to improved quality and lowered costs. Examples include reduced patient turnaround time through better referral management, improved clinical and administrative efficiencies, and reduced orders for duplicate tests and procedures.

There are also advantages in performance measurement. Community-based measures focus on the patient's longitudinal experiences (e.g., total costs and health outcomes) and address the problem of fragmented care. Public reporting on an aggregated, rather than individual, basis may alleviate some physicians' resistance to the process. Community-based measures also reduce administrative complexity, making reporting less daunting than collecting data from individual physicians.

Privacy and Security of Health Information

Individually identifiable health information is key to the provision of high quality and cost-effective patient care. Without up-to-date and accurate patient information healthcare providers are limited in their ability to render the best possible treatment decisions and patient care.

However, in order to create a system in which patient information may seamlessly flow from one treating provider to another, patients must be assured that their information will be and remain protected. Accordingly, privacy and security of patient information must be one of the most important core principles of the collaborative model.

Collaborative Activities

The six collaborative activities represent components necessary to create an environment that forms the foundation for effective and sustainable health information networks.

Education and Outreach
Providing Resources for Patients, Providers, and Health IT Users

For health IT and HIE to be successful there must be coordinated efforts with every community member involved in patient care. Community members should be educated on the importance of this effort and their role in the long-range vision.

Broadband Infrastructure
Creating Reliable Broadband Networks and Connectivity

Healthcare should begin to adopt IT and broadband as a fundamental part of the business model. Broadband can help enhance a stressed but critical community sector and become an attractive asset.

Health IT Adoption and Support
Enabling Operations through Training and Implementation

Health IT adoption and support includes assisting providers with the acquisition, implementation, effective use, upgrading, and ongoing maintenance of health IT, including EHRs.

Health Information Exchange
Facilitating Secure Health Information Exchange Locally and Statewide

The HIE system should include the components of an administrative, social, and legal framework; technical infrastructure; clinical data exchange (data types and flow); HIE-based office automation services; user sign-up and sales; and quality improvement and research. The local HIE system provides community-level business services to expand beyond the four walls of physician practice and across a region or state.

Quality Improvement and Research
Using Informatics and Reporting to Improve Patient Safety

Quality improvement and research represent two significant components of the collaborative model. Quality improvement includes clinical decision support tools and data reporting, which includes population health reporting and quality measures reporting. Research includes clinical research, office management research, and HIE research.

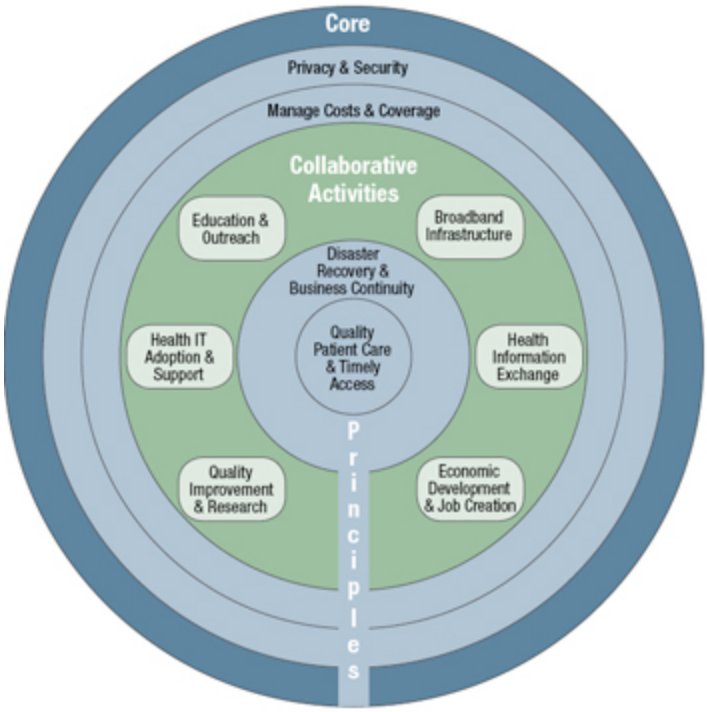
Economic Development and Job Creation
Supporting Growth in the Healthcare Sector

Economic development represents the need to convene every major component of local healthcare. The model empowers and leverages one of the community's largest private sector industries, healthcare.

More information on the model, described in the report "Quality Healthcare through Health Information Technology and Exchange: Recommendations for Health IT and HIE in Florida," is available at www.bigbendhealth.com/plan.pdf.

The Collaborative Model

The Model begins by establishing the core principles and collaborative activities that form the foundation for efficient, effective, and sustainable health information networks across one state. These core principles and collaborative activities are overlaid with statewide goals, objectives, and strategies as a template for a comprehensive health IT and HIE plan. The plan is flexible enough to evolve as state and national expectations develop while still focusing on what works for providers at the local level.



(view graphic as PDF)

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