

An Overview of HIE

A Guide for the Rural Hospital Performance Improvement Program

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INTRODUCTION

Health information exchange (HIE) is the electronic exchange of information that allows health care providers and patients to access and securely share medical information (HealthIT.gov n.d.). HIE is becoming a standard of care among clinical practitioners with more than half of physicians now using electronic health record (EHR) systems (ONC 2013). With requirements for meaningful use and new payment models such as - bundled payment options, patient-centered medical homes and accountable care organizations - care coordination is a must. Due to these initiatives, providers are motivated to share medical information by participating in HIEs and by doing so provide more efficient and effective care.

Timely sharing of medical information can better inform decision-making at the point of care and allow providers to:

- Avoid readmissions
- Avoid medication errors
- Improve diagnoses
- Decrease duplicate testing (HealthIT.gov n.d.)

As part of Stage 2 of meaningful use, the Centers for Medicare and Medicaid Services (CMS) specified that eligible providers must connect with at least three external providers that do not use the same EHR or they must establish an ongoing connection with at least one health information exchange entity (ONC 2013). Patient engagement is another important reason for HIE. Patients are used to technology that enables them to have access to all of their information and want the capability to communicate with health care providers in the same manner. In order to qualify for meaningful use incentive payments, providers must provide online access to health information for over 50% of their patients, and an HIE can facilitate this access if a Personal Health Record (PHR) is incorporated into the HIE.

Are there different types of HIE?

There are currently three key forms of HIE – directed exchange, query-based exchange and consumer mediated exchange.

1. Directed Exchange – used by providers to securely send patient information directly to another health care professional. This information is sent over the internet and is encrypted, secure and reliable. For example, a patient sees their primary care provider and is referred to a specialist. The primary care provider can send electronic care summaries that include labs, medications and issues to the specialist so the patient does not have to give redundant information when seeing the specialist.

The Direct Project is a set of standards, protocols and services that enable simple, secure electronic transport of health information (push messaging) between healthcare participants (e.g. providers, labs). The Direct Project will facilitate “direct” communication with a focus towards more advanced levels of interoperability than simple paper can provide. Direct focuses on transportation security mechanism for

the content being exchanged, but does not specify the actual content itself. The Direct Project will coexist with other HIE services based on the existing Nationwide Health Information Network standards and services (National Rural Health Resource Center 2013).

See the [HIE Direct Guide](#) in the National Rural Health Resource Center's HIE Toolkit for more information on the Direct Project. The Toolkit includes; applications, minimum requirements, vendor solutions, participation, scope, interoperability, deployment, privacy and security, protocols, specifications and standards.

2. Query-based Exchange – used by providers to search and discover clinical sources on a patient and is typically used when delivering care that was not planned such as emergency room visits.

[More information on technology that supports query-based exchanges >](#)

3. Consumer-mediated Exchange – provides patients with access to their health information, which can enable the patient to manage their care online. With this technology patients can: Give providers their health information; Update wrong or missing information; Update billing information; and, Monitor their own health (HealthIT.gov n.d.).

What are the options for engaging in an HIE?

There are several options for engaging in an HIE and it is important that you assess your organization to see what the best fit is for your HIE goals.

1. Build Your Own HIE – typically owned and operated by hospitals and can tailor use-cases to provider's needs and can set privacy and security controls.
2. Join an HIE – can include private exchanges, EHR vendor solutions or state-operated networks and will be lower in cost with a larger range of partners to exchange information with.
3. Statewide HIE – subsidized by the federal government to lower infrastructure costs and typically include secure messaging, exchange of lab results, provider directories and record locator services.
4. Direct Project – provides access to nationwide communication, securely encrypted messages and attachments, simple implementation and cost-effective.
5. EHR Vendor Solutions – includes functionality built directly into the EHR with minimal disruption to clinical workflows and low use of internal technical resources. However, a limited number of vendors offer solutions for exchange between multiple EHR vendors.
6. Private HIE – includes a wide variety of capabilities, and typically strong financial sustainability. Offered by provider collaboratives, state hospital associations, regional non-profits, or software vendors (National Rural Health Resource Center 2013).

It is important to remember that before your organization engages in an HIE, it is necessary to complete an HIE Readiness Self- Assessment. This Assessment is a tool that will assist in

the evaluation of readiness for HIE and identify operational, financial and technical considerations that are necessary to build a sustainable HIE. It will also assist in the creation of a road map for the implementation of the HIE (National Rural Health Resource Center 2013). Some components to consider when completing the Assessment include:

- Environmental scan
- Health exchange use cases
- Operational goals and benchmarks
- HIE workflow assessment
- IT/interoperability assessment
- Meaningful use gap analysis
- Financial sustainability (National Rural Health Resource Center 2013)

See the [Health Information Exchange – First Considerations](#) section of the National Rural Health Resource Center’s HIE Toolkit for more information on how to complete an HIE Readiness Self-Assessment.

I understand the basics of HIE. Now where do I start?

There are several ways to get started with HIE such as:

1. Check your state’s HIE initiatives. HIE can vary from state to state. For information on what efforts are taking place within your state, visit the [State Health Information Exchange Program](#).
2. Set up a time to talk with providers in your area. After you determine what service providers are available in your area, talk to them and decide which is best for you. Make sure you understand the following by the end of the conversation:
 - o What are the economics and sustainability of the HIE?
 - o What are the internal requirements of participating in the HIE?
 - o What technology is needed and what forms of exchange does the HIE support?
 - o What is the in-direct return on investment?
 - o What are the risks and liabilities involved with joining the HIE? (HealthIT.gov n.d.)
3. Check with your vendor to see if they have HIE capabilities built into the EHR. Be sure to ask the following questions:
 - o What privacy and security features does your product provide and support?
 - o What forms of exchange does your EHR support?
 - o What are the costs associated with upgrading to include HIE within our EHR?
 - o What are the maintenance and monthly costs of including HIE within our EHR?
 - o If you don’t have HIE capabilities right now, do you plan to have them in the future and if so, what is the timeframe? (HealthIT.gov n.d.)

RESOURCES

[Health Information Exchange](#)

HealthIT.gov

Provides an overview on HIE as well as the benefits, governance, nationwide HIE strategy, standards and operability and how to get started with HIE.

[HIE Toolkit](#)

National Rural Health Resource Center

Includes a comprehensive Toolkit for HIE guidance. Sections of the Toolkit are: HIE Policy Matrix; HIE Direct Guide; ROI Calculator; Privacy and Security Overview and Resource List; and, Health Information Exchange – First Considerations.

[Rural Assistance Center's HIT Toolkit](#)

Rural Assistance Center

Outlines a comprehensive list of federal resources available for free on the topic of HIE as well as all other aspects of health information technology and meaningful use.

[State Health Information Exchange Cooperative Agreement Programs](#)

HealthIT.gov

This program funds states' efforts to build capacity for exchanging health information across the health care system. Grantees are to develop solutions in five key areas, including:

- Create and implement up-to-date privacy and security requirements for HIE
- Coordinate with Medicaid and state public health programs to establish an integrated approach
- Monitor and track meaningful use HIE capabilities in their state
- Set strategy to meet gaps in HIE capabilities
- Ensure consistency with national standards

[What Should Health Care Professionals and Support Staff Know about Health Information Exchange?](#)

Office of the National Coordinator for Health Information Technology

Provides an overview of what staff need to know regarding the implementation of HIE including information on what patients and families expect. Also provides information on the benefits of Direct exchange.

BIBLIOGRAPHY

- HealthIT.gov. "Getting Started with HIE." *Health Information Exchange*. n.d. <http://www.healthit.gov/providers-professionals/health-information-exchange/getting-started-hie> (accessed June 2, 2013).
- . "What is HIE?" *Health Information Exchange*. n.d. <http://www.healthit.gov/providers-professionals/health-information-exchange/what-hie> (accessed June 2, 2013).
- National Rural Health Resource Center. "HIE Toolkit." *National Rural Health Resource Center*. January 2013. <http://www.ruralcenter.org/rhitnd/hie-toolkit> (accessed June 2, 2013).
- ONC. "What Should Health Care Professionals and Support Staff Know About Health Information Exchange?" *National Learning Consortium: Advancing America's Health Care*. February 28, 2013. http://www.raconline.org/hit/pdf/hie_professionals.pdf (accessed June 2, 2013).
- U.S. Department of Health and Human Services. *Rural Health IT Toolbox*. n.d. <http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Telehealth/whatarethereimbursement.html> (accessed April 30, 2013).