CHAPTER 1

The HIE Landscape

“...We can envision a transformation of our health system to improve health care quality, efficiency, equity, and safety through the use of health information technology...”

David Blumenthal, MD, MPP
National Coordinator for Health Information Technology

INTRODUCTION

You are about to embark on one of the most important and exciting journeys of your life. Creating the capabilities required to enable electronic health information exchange (HIE) is a journey of change that holds the promise of better healthcare for all of us. We are now seeing unprecedented amounts of attention, resources, and real money beginning to be allocated to this cause. There are major efforts at the national and state levels and in many individual regions. This convergence of attention, resources, and funding has created a once-in-a-generation opportunity and has spawned what we view as a major societal movement.

Before you begin any journey—especially one going into uncharted territory like HIE—it is always wise to arm yourself with a good understanding of the landscape. And HIE is a landscape that is undergoing a seismic shift.

We begin this chapter, and this book, with a brief history of HIE in the U.S. and an overview of the current HIE landscape—as of the writing of this book in late 2010. It is important for you to understand this landscape as you begin your HIE formation efforts and therefore need the ability to educate your stakeholders and the community at large about the value of HIEs. We provide a briefing on the context within which HIE is taking place in the U.S., identify and describe key federal agencies and initiatives, and provide a broad list of online resources.

The discussion in this chapter is meant as an overview to ensure that you are aware of the key organizations, programs, and potential funding sources that could impact your efforts to form an HIE. References are provided at the end of chapters that you can use to gain more in-depth information on the topics presented. Because the HIE landscape continues to change at a rapid pace, we encourage you to frequently check those online resources listed in the references to ensure you have the most current information.
First, we concentrate on the initiatives at the federal level and then discuss how these will impact you at the state, regional, and community levels. As we write this, virtually every state is in the process of developing or implementing its HIE strategic and operational plan. While we do not discuss the specifics of each state’s plan, we do provide the basics that each of the states are required to address to receive its share of the HIE-related American Recovery and Reinvestment Act of 2009 (ARRA) funding. We spend more time discussing the roles of the state HIE efforts and the regional extension centers in this chapter than some of the other initiatives. This is because they directly impact much of what you need to accomplish and can serve as good resources.

WHAT IS HEALTH INFORMATION EXCHANGE?

The *HIMSS Dictionary of Healthcare Information Technology Terms, Acronyms, and Organizations*\(^1\) defines health information exchange (HIE) as:

1. The sharing action between any two or more organizations with an executed business/legal arrangement that have deployed commonly agreed-upon technology with applied standards, for the purpose of electronically exchanging health-related data between the organizations; and

2. A catchall phrase for all health information exchanges, including regional health information organizations (RHIOs), state level health information exchanges (SLHIEs), health information organizations (HIOs), Agency for Healthcare Research and Quality (AHRQ)-funded communities, and private exchanges.

In this book, we use HIE to refer to both the exchange of health information, as well as the organization that supports the exchange.

THE FOUNDATIONAL ORGANIZATIONS

What we regard as the current era of HIE began in earnest in 2004. Prior to that time—going back to the 1990s and earlier—some very forward thinking individuals and communities began community health information networks, or, as they are commonly called, CHINs. Most of these early efforts did not succeed. However, there are some that have endured—or spawned successful efforts that are in operation today, such as the Indiana Health Information Exchange (IHIE), Utah Health Information Network (UHIN), and HealthBridge in Cincinnati.

As we mentioned previously, the current era for HIE began in 2004. That was the year that then President George W. Bush signed an Executive Order which established the Office of the National Coordinator for Health Information Technology (ONC) within the U.S. Department of Health & Human Services (HHS). The responsibilities of ONC at its creation were to:

- Provide leadership for the development and implementation of the nationwide health IT infrastructure;
- Advise the Secretary of HHS on health information technology (IT) policies and initiatives; and
- Coordinate the efforts of HHS to meet the goal of making an electronic medical record available for most Americans by 2014.
Since its inception, the ONC, along with AHRQ which is also part of HHS, has launched a series of initiatives. The important work from these initiatives has had a significant impact on the HIE landscape of today; thus, we believe that it is crucial that you are aware of these key projects. Figure 1-1 provides a high-level timeline of key federal health information technology initiatives. In the following section, we describe those initiatives in more detail.

**Nationwide Health Information Network (NHIN)**

A long-term goal of HHS and ONC is to develop a nationwide health information network (NHIN). The NHIN will enable patients, physicians, hospitals, community health centers, public health agencies, laboratories, imaging centers, and other healthcare entities to share clinical information in a secure environment.

In 2004, Phase 1 of the NHIN initiative was launched. This phase consisted of four consortia being tasked to design and evaluate standards-based prototype architectures for the NHIN. Building upon the work done in Phase 1 (the Prototype Architectures), HHS launched Phase 2 (Trial Implementations) in 2007. HHS awarded contracts to nine HIEs to begin trial implementations of the NHIN. Later, an additional six grants were awarded.
This consortium of information exchanges, including providers and several federal agencies, worked together as the NHIN Cooperative to securely exchange data, which included summary patient records for providers and patients. In addition to the actual exchange of data, these projects also developed a robust toolset to help in the development and implementation of the NHIN.

Today, in late 2010, the NHIN is operating as the NHIN Limited Production Exchange. This network connects a diverse set of federal agencies and private organizations that need to securely exchange electronic health information. These entities currently include the Social Security Administration, MedVirginia, the Department of Veterans Affairs, the Department of Defense, and Kaiser Permanente, among others.

The NHIN Work Group (a new workgroup under the HIT Policy Committee—discussed later) was formed to offer recommendations regarding a policy and technical framework that enables the Internet to be used for the secure and standards-based exchange of health information in a way that both fosters innovation and is open to all. At a very high level, the new NHIN Work Group is holding discussions on how to use the Internet to transform healthcare.

After receiving an initial set of recommendations from the NHIN Work Group and others, ONC initiated a new project in the spring of 2010, NHIN Direct, to assess and test a working set of specifications to support local health information exchange between providers. As part of this project, a community of stakeholders will collaborate through an open and transparent process to evaluate a set of policies, standards, and services that could enable simple, direct transport of information over the Internet (between providers who know each other). The group will initially focus on the use cases that support meaningful use requirements for 2011. This project is limited in scope with defined outcomes.

Healthcare Information Security and Privacy Collaboration (HISPC)

To address the many conflicting security and privacy regulations, the Healthcare Information Security and Privacy Collaboration Project (HISPC), co-managed by AHRQ and ONC, was launched in 2006. The initial charge to the HISPC project was to enhance the privacy of health information by addressing variations in policies and state laws affecting privacy and security practices. The HISPC project involved more than 40 states and U.S. territories.

The work of Phase 1 of the project focused on the business policies and practices in general, and the security policies and practices in particular, that might hinder the development of effective national, regional, and local systems for electronic health information exchange.

Subsequent phases of the project produced an impact analyses of various state privacy laws affecting HIE. The work in these subsequent phases focused on analyzing consent data elements in state law; studying intrastate and interstate consent policies; developing tools to help harmonize state privacy laws; developing tools and strategies to educate and engage consumers; developing a toolkit to educate providers; recommending basic security policy requirements; and developing model interorganizational agreements.
Health Information Technology Standards Panel (HITSP)

In October, 2005, HHS awarded a $3.3 million contract to the American National Standards Institute (ANSI) to convene the Health Information Technology Standards Panel (HITSP). HITSP is a multidisciplinary coordinating body charged with identifying the technical standards necessary to enable electronic healthcare data interoperability. As of the writing of this book, the contract for HITSP has sunset.

HHS’s charge to HITSP was to develop, prototype, and evaluate a harmonization process for achieving a widely accepted and useful set of health IT standards that would support interoperability among healthcare software applications, particularly electronic health records (EHRs). This group was instrumental in identifying and harmonizing standards for health IT. Without the development of these standards, the effective sharing of health information would have remained a nearly insurmountable task.

Certification Commission for Healthcare Information Technology (CCHIT)

The Certification Commission for Health Information Technology (CCHIT) is a private, non-profit organization. Its mission has focused on development of a certification process to accelerate the adoption of health IT by creating an efficient, credible, and sustainable certification program for EHRs. There are more than 200 EHR products on the market today, but until CCHIT was formed in 2006, there were no standard criteria for objectively evaluating their capabilities for sharing data and being interoperable. In 2010, ONC issued the final rule to establish the temporary certification program for EHRs. As of this writing, CCHIT has applied to become an ONC Authorized Testing and Certification Body (ONC-ATCB).

American Health Information Community (AHIC)

The American Health Information Community (AHIC) was a federal advisory body chartered to make recommendations to the Secretary of HHS on how to accelerate the development and adoption of health IT. Prior to the formation of AHIC, there were no agreed-upon standards in place to enable electronic sharing of health information.

From its inauguration in 2005 through November, 2008, AHIC advanced more than 200 recommendations over the course of 25 meetings either in Washington, DC, or at other locations. The recommendations typically addressed a wide variety of enablers and barriers to HIE, such as:

- Standards and certification—for priority areas, which were presented as “use cases”;
- Business case—includes public and private sector reimbursement policy;
- Business processes—necessary to integrate health IT into healthcare or consumer management of health;
- Social and cultural issues—includes public awareness and consumer engagement;
- Privacy and security—includes a long list of complex inter-related issues (addressed in detail in Chapter 7, Protecting Patient Privacy and Chapter 8, The Time for Technology);
• Medical-legal issues—includes liability and licensure of clinicians; and
• The AHIC recommendations to the HHS focused on both consumer/patient needs and population health needs, as well as on the technology/interoperability necessary to advance the use of health information technology (health IT or HIT).

AHIC successfully concluded its operations at the final meeting on November 12, 2008. According to the Secretary’s original intent, AHIC was transitioned from a federal advisory committee to a new private-public organization, the National eHealth Collaborative (NeHC). The NeHC intends to work cooperatively and aggressively to accelerate progress on a number of initiatives critical to the achievement of a secure, nationwide electronic health information network.

THE AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA)

And then, along came ARRA—the American Recovery and Reinvestment Act of 2009. On February 17, 2009, President Barack Obama signed ARRA into law. What ARRA addresses goes far and beyond HIE, but those areas that do address HIE are truly game-changing.

By now, you have heard of the Health Information Technology for Economic and Clinical Health Act (HITECH). This is the section of ARRA that directly addresses health IT. Another section of ARRA addresses the Centers for Medicare & Medicaid Services (CMS) and specifically lays out the requirements and incentives for the Meaningful Use of EHRs. These two sections of the law are the primary federal influences affecting the HIE landscape today. Their impact is, and will continue to be, enormous.

The following is a summary and brief discussion of the health IT-related provisions included in ARRA. Sections of the summary are excerpted from the HIMSS Summary published in July, 2009.

Formal HIE Leadership at the Federal Level

The HITECH Act established formal health IT leadership at the federal level through statute.

Office of the National Coordinator

HITECH established the Office of the National Coordinator for HIT (ONC) and declared that it be headed by a National Coordinator appointed by the Secretary of HHS. The ONC is at the forefront of the federal government’s health IT efforts and is a resource to the entire health system to support the adoption of health IT and the promotion of nationwide health information exchange to improve healthcare. ONC is organizationally located within the Office of the Secretary, HHS.

ONC is the federal entity charged with coordination of nationwide efforts to implement and use the most advanced health IT and the electronic exchange of health information. ARRA put the office, formerly established and authorized by executive order, into statute and established the office by federal law. The legislation authorizes and appropriates $2 billion over four years (2009-2012) to fund the ONC.
HIT Policy Committee
The Health IT Policy Committee\textsuperscript{12} is charged with making recommendations to the National Coordinator for Health IT on a policy framework to be used for the development and adoption of a nationwide health information infrastructure, including appropriate standards, for the exchange of patient medical information.

HIT Standards Committee
The Health IT Standards Committee\textsuperscript{13} is charged with making recommendations to the National Coordinator for Health IT on standards, implementation specifications, and certification criteria for the electronic exchange and use of health information.

**Strengthening Privacy and Security Requirements**
The HITECH Act specifically addressed privacy and security in several areas.

**Security Breach Notification**
Under the legislation, a federal security breach notification requirement was established for health information that is not encrypted or otherwise made indecipherable. It requires that individuals be notified if there is an unauthorized disclosure or use of their health information.

**New HIPAA Business Associates’ Requirements**
ARRA strengthens the Health Insurance Portability and Accountability Act (HIPAA) and now ensures that new entities that were not contemplated when HIPAA was written (such as personal health record vendors, RHIOs, HIEs, etc.) are subject to the same privacy and security rules as covered entities (e.g., providers and health insurers), by treating these entities as Business Associates under HIPAA. Because of that change, the HIE organization is now subject to the same privacy and security regulations as covered entities under HIPAA. This is discussed in more detail in Chapter 7, *Protecting Patient Privacy*.

**Accounting of Disclosures**
ARRA states that patients have the right to request an accounting of any disclosures of their health information that were made through the use of an electronic record.

**Sales/Marketing of Protected Health Information (PHI)**
ARRA contains new restrictions for using personal health information (PHI) for marketing. It also addresses the circumstances under which an entity can receive remuneration for PHI.

In July, 2010, new proposed regulations under HIPAA were announced by HHS that would restrict disclosures of certain PHI, extend some of the Privacy and Security Rules requirements, expand individuals’ rights to access their information, and establish new limitations on the use and disclosure of PHI for marketing and fundraising purposes.\textsuperscript{14}
Federal Funding of HIE

Many sources of funding are addressed in ARRA. We will cover three sources that directly relate to your HIE efforts: Meaningful Use Incentives through CMS, Health Information Technology Extension Program, and State Health Information Exchange Cooperative Agreement Program.

Meaningful Use Incentives

ARRA includes billions of dollars in Medicare and Medicaid incentive payments to providers and hospitals to promote the “Meaningful Use” of certified health IT products. These incentives are thoroughly described in the document entitled Medicare and Medicaid for the Meaningful Use of Certified EHR Technology: Incentive Payments through Medicare and Medicaid for the Meaningful Use of Certified EHR Technology by Eligible Professionals and Hospitals. The Congressional Budget Office estimates the total cost of providing Medicare and Medicaid incentives for eligible professionals and hospitals that demonstrate a meaningful use of certified EHR technology will be $20.8 billion through fiscal year 2019.

On July 16, 2010, CMS issued the final rule for the Medicare EHR Incentive Program and the Medicaid EHR Incentive program. Detailed information on these programs can be found at the “Official Web Site for the Medicare and Medicaid EHR Incentive Programs.”

The Purpose of the Meaningful Use Incentives Law

Congress designed the Meaningful Use legislation to improve U.S. healthcare through the development of a solid electronic health information infrastructure, while simultaneously stimulating the economy through new investment and job growth. The five broad goals for this program are summarized in Figure 1-2.

Incentive Payments to Eligible Providers

An eligible provider will receive incentive payments as specified in the legislation for the first five years (2010–2015), for demonstrating a meaningful use of EHR technology and demonstrating performance during the reporting period for each payment year. To promote rapid adoption of EHR technology, if an eligible professional does not demonstrate meaningful use by 2015, his/her reimbursement payments under Medicare will begin to be reduced. No incentive payment will be made after 2016. Table 1-1 shows an example of the potential reimbursement to eligible Medicare physicians who dem-

- Improve quality, safety, efficiency, and reduce health disparities.
- Engage patients and families.
- Improve care coordination.
- Ensure adequate privacy and security protections for personal health information.
- Improve population and public health.

Figure 1-2: Goals of the Meaningful Use Program
onstrate that they are meaningfully using EHRs. The incentives for eligible providers under Medicaid differ somewhat from those for providers under Medicare. They will be administered by each state’s Medicaid office.

### Progression of Meaningful Use

“Meaningful use of certified EHR technologies” is a term used in the ARRA. It is defined by CMS in a Notice of Proposed Rulemaking (NPRM) as the use of health IT to further the five broad goals of the ARRA and to further the goal of information exchange among health professionals. There is also an Interim Final Rule (IFR) on the Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology. This IFR specifies the standards that an EHR must meet if it is to be certified for the meaningful use criteria. As of this writing, both of these rules have yet to be finalized.

Figure 1-3 shows the progression of the goals that are meant to be achieved through meaningful use:

- Stage 1 efforts are focused on improving the electronic capture and sharing of health information.
- Building on that foundation, stage 2 will focus on implementing advanced clinical practices as we shift from memory-based medicine to information-driven care.
- Stage 3 will focus on showing improved outcomes in the population as healthcare broadly adopts the 21st-century tools available to deliver better treatment outcomes and enhanced disease prevention.

### Health Information Technology Regional Extension Program

The HITECH Act authorizes a Health Information Technology Regional Extension Program. The extension program is modeled after the agriculture extension pro-
grams and consists of the establishment of Health IT Regional Extension Centers and a national Health Information Technology Research Center (HITRC).

Each of the Regional Extension Centers will offer assistance, defined as education, outreach, and technical assistance, to eligible providers as defined in the ARRA legislation. The objective is to help these healthcare providers located in their geographic service areas select, successfully implement, and meaningfully use certified EHR technology. This is to be done to support and accelerate healthcare providers’ ability to become meaningful users of EHRs. The programs’ objectives are to ensure that primary care clinicians who need help are provided with an array of on-the-ground support to meaningfully use EHRs. The specific goal of the program is to provide outreach and support services to at least 100,000 priority primary care providers nationally within the first two years.

The HITRC is responsible for gathering relevant information on effective practices and helping the Regional Extension Centers collaborate with each other and with their relevant stakeholders. The goal is to identify and share best practices in EHR adoption, effective use, and provider support.

The federal government has awarded $642,790,024 to 60 organizations to establish Regional Extension Centers.

**State Health Information Exchange Cooperative Agreement Program**

Achieving meaningful use of EHRs requires that HIE capability must be present and available to providers. Recognizing that most states do not currently have this capability in place and widely available, the HITECH Act authorizes the establishment of the State Health Information Exchange Cooperative Agreement Program. The objective of this program is to advance appropriate and secure HIE across the healthcare system. This program funds individual states’ efforts to rapidly build capability and capacity for
exchanging health information across the healthcare system—both within and across states. States receiving the awards are responsible for (1) increasing connectivity, and (2) enabling patient-centric information flow to help improve the quality and efficiency of care. Key to this anticipated improvement is the continual evolution and advancement of necessary governance, policies, technical services, business operations, and financing mechanisms for HIE.

The purpose of this program is to continuously improve and expand HIE services to reach all healthcare providers to improve the quality and efficiency of healthcare. The governors of the individual states have the option to designate a state-government or non-government entity to operate the program in their state. Because of this option, the organization in a state responsible for the operation of the program is frequently referred to as the State Designated Entity.

The federal government has awarded $547,703,438 to states and U.S. territories under the State Information Exchange Cooperative Agreement Program.

**General Requirements for the First Two Years of the Grant**

According to the Request for Grant for funding for the State Health Information Exchange Cooperative Agreement Program, the first two years of the program are critical for building HIE capability. States and their State Designated Entities are expected to make considerable progress in achieving a critical mass of providers participating in HIE during that time. Thus, the majority of the funding available for drawdown will be available in the first two years.

While a state or a State Designated Entity may or may not be the entity to actually implement and operate the technical services to support HIE, they are required to act as the governance entity responsible for ensuring that HIE capability within the state will be developed with appropriate oversight and accountability. The state or State Designated Entity must develop and implement a plan that provides reasonable assurance that the HIE requirements for meaningful use will be attained by 2015—the same year that Medicare penalties begin for providers that have not achieved meaningful use of EHRs.

The following sections show the key requirements the states must meet in the first two years of the four-year grant. The work is divided into five government-defined domains:

- Governance
- Finance
- Technical Infrastructure
- Business and Technical Operations
- Legal/Policy

If you are not familiar with the term “domain,” you can think of it as a way to categorize work or activity, typically over time.

**Specific Requirements in the Governance Domain**

Within the first two years of the grant, states are required to complete the following activities in the Governance domain:
• Establish a governance structure that achieves broad-based stakeholder collaboration with transparency, buy-in, and trust.
• Set goals, objectives and performance measures for the exchange of health information that reflect consensus among the healthcare stakeholder groups and that accomplish statewide coverage of all providers for HIE requirements related to meaningful use criteria.
• Ensure the coordination, integration, and alignment of efforts with Medicaid and public health programs through efforts of the State Health IT Coordinators.
• Establish mechanisms to provide oversight and accountability of HIE to protect the public interest.
• Account for the flexibility needed to align with emerging nationwide HIE governance that will be specified in future program guidance.

Specific Requirements in the Financial Domain
Within the first two years of the grant, states are required to complete the following activities in the Finance domain:
• Develop the capability to effectively manage the funding necessary to implement the state strategic plan.
• Develop a path to sustainability including a business plan with feasible public/private financing mechanisms:
  – For ongoing information exchange among healthcare providers; and
  – With those offering services for patient engagement and information access.

Specific Requirements in the Technical Infrastructure Domain
Within the first two years of the grant, states are required to complete the following activities in the Technical Infrastructure domain:
• Develop, or facilitate the creation of, a statewide technical infrastructure that supports statewide HIE. While states may prioritize among these HIE services according to its needs, the HIE services that must be developed include:
  – Electronic eligibility and claims transactions;
  – Electronic prescribing and refill requests;
  – Electronic clinical laboratory ordering and results delivery;
  – Electronic public health reporting (i.e., immunizations, notifiable laboratory results);
  – Quality reporting;
  – Prescription fill status and/or medication fill history; and
  – Clinical summary exchange for care coordination and patient engagement.
• Leverage any existing regional and state level efforts and resources that can advance HIE, such as master patient indexes, health information organizations (HIOs), and the state’s Medicaid Management Information System (MMIS).
• Develop or facilitate the creation and use of shared directories and technical services, as applicable for the state’s approach for statewide HIE. Directories may include but are not limited to health care providers, laboratory service providers, radiology service providers, and health plans. Shared services may
include but are not limited to patient matching, provider authentication, consent management, secure routing, advance directives, and messaging.

**Specific Requirements in the Business and Technical Operations Domain**

Within the first two years of the grant, states are required to complete the following activities in the Business and Technical Operations domain:

- Provide technical assistance as needed to HIEs and others who are developing HIE capacity within the state.
- Coordinate and align efforts to meet Medicaid and public health requirements for HIE and the evolving Meaningful Use criteria.
- Monitor and plan for remediation of the performance of HIE throughout the state.
- Document how the different HIE efforts within the state are enabling meaningful use.

**Specific Requirements in the Legal/Policy Domain**

Within the first two years of the grant, states are required to complete the following activities in the Legal/Policy domain:

- Identify and harmonize the federal and state legal and policy requirements in order to enable appropriate health information exchange services that are developed in the first two years.
- Establish a statewide policy framework that allows incremental development of HIE policies over time, enables appropriate inter-organizational health information exchange, and meets other important state policy requirements such as those related to public health and vulnerable populations.
- Develop and implement enforcement mechanisms that ensure those implementing and maintaining health information exchange services have appropriate safeguards in place and adhere to legal and policy requirements that protect health information.
- Minimize obstacles in data sharing agreements.
- Ensure that the policies and legal agreements needed to guide the technical services that have been prioritized by the state or State Designated Entity are implemented and then evaluated annually.

**Other HITECH Funding Programs**

The three programs just described are the broad nationwide programs funded by HHS. HHS is also funding additional targeted programs to promote health IT and HIE.

**Beacon Community Program**

In May, 2010, ONC awarded $220 million to 15 Beacon Communities across the U.S. These Beacon Communities will each use the funds to create model programs in their geographical area to demonstrate the benefits of widespread adoption of health IT and HIE to improve the delivery of care for all Americans. They will each generate and disseminate evidence and insights that are applicable to the rest of the nation about the use
of health IT resources. The objective is to inform a range of specific clinical, care delivery, and other reforms that, together, can enable the selected communities to achieve measurable and sustainable improvements in healthcare cost, quality, and population health. As of this writing, ONC announced funding opportunities for two additional Beacon Communities, raising the total to 17.

**Strategic Health IT Advanced Research Projects (SHARP) Program**

The purpose of Strategic Health IT Advanced Research Projects (SHARP) Program awards is to fund research focused on achieving breakthrough advances to address well-documented problems that have, up until now, impeded adoption of health IT: (1) Security of Health Information Technology; (2) Patient-Centered Cognitive Support; (3) Healthcare Application and Network Platform Architectures; and (4) Secondary Use of EHR Data. To date, $60 million has been awarded to four universities.

**IT Workforce Development Programs**

There are also funds being awarded for IT workforce development.

- **Curriculum Development Centers**—This program provides $10 million in grants to five domestic institutions of higher education to support health IT curriculum development.

- **Community College Consortia to Educate Health Information Technology Professionals**—This program seeks to rapidly create health IT education and training programs at community colleges or expand existing programs. Community colleges funded under this initiative will establish intensive, non-degree training programs that can be completed in six months or less. The consortium is comprised of five regional groups with more than 70 member community colleges in all 50 states that have received grants of $36 million.

- **Program of Assistance for University-Based Training**—The purpose of this program, which has provided $10 million in grants, is to rapidly increase the availability of individuals qualified to serve in specific health IT professional roles that require university-level training.

- **Competency Examination for Individuals Completing Non-Degree Training**—This program provides a $6 million grant to Northern Virginia Community College to support the development and initial administration of a set of health IT competency examinations.

**Expanded Access to Broadband**

ARRA appropriated $7.2 billion to expand access to broadband services in the U.S. The funding is administered by two federal agencies: (1) the Commerce Department’s National Telecommunications and Information Administration (NTIA), which will receive $4.7 billion to administer the Broadband Technology Opportunities Program;
and (2) the Agriculture Department’s Rural Utilities Service, which will receive $2.5 billion to administer the Broadband Initiatives Program.

The Broadband Technology Opportunities Program (1) supports the deployment of broadband infrastructure; (2) enhances and expands public computer centers, such as those found in public libraries; (3) encourages sustainable adoption of broadband service; and (4) develops and maintains a nationwide public map of broadband service capability and availability.

The Broadband Initiatives Program will furnish loans, grants, and loan/grant combinations to assist with addressing the challenge of rapidly expanding the access and quality of broadband services across rural America.

**Technical Standards and Certification**

ARRA specified that ONC should issue standards and certification criteria for the certification of EHR technology. On July 28, 2010, ONC published the Standards and Certification Criteria Final Rule in the *Federal Register*. This rule describes the requirements that EHRs must meet to ensure they offer the “necessary technological capability, functionality, and security to help them meet the Meaningful Use criteria established for a given phase.”

To address the immediate needs for EHR certification for meaningful use, ONC initiated a temporary certification program to certify that EHRs are capable of assisting providers to meet the Meaningful Use criteria. Applications to become an ONC-Authorized Testing and Certification Body (ONC-ATCB) were being accepted as of the writing of this book (summer 2010).

**THE HITECH VISION**

All of the organizations and programs previously mentioned have been initiated to improve the quality of healthcare. The provisions of the HITECH Act are specifically designed to work together to:

- Provide the necessary assistance and technical support to providers to assist them to achieve Meaningful Use of EHRs;
- Enable coordination and alignment of HIE efforts and resources within and among states;
- Establish connectivity to the public health community in case of emergencies; and
- Ensure the workforce is properly trained and equipped to be meaningful users of EHRs.

Figure 1-4 provides a high-level summary of how the programs are envisioned to work together.
The **OBJECTIVE** is improved healthcare and improved patient outcomes through the use of EHRs and the sharing of health information.

The **Regional Extension Centers** provide direct support to providers in helping them meet the requirements of using EHRs to meet the Meaningful Use criteria and improve care.

The **State Designated Entities** and **HIEs** provide the infrastructure—legal, governance, services and technology—to enable the providers to exchange health information in order to reach the objective of improved quality of care.

**Workforce training** programs provide trained personnel in the area of IT.

**Broadband programs** provide the basic Internet connectivity—especially in rural areas that have traditionally been underserved in their communications capability.

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**Figure 1-4: State HIE Collaborative and HIT Extension Center Program Support**

The provisions of the HITECH Act are best understood not as investments in technology, but as efforts to improve the health of Americans and the performance of the healthcare system. According to Dr. David Blumenthal, the current National Coordinator for HIT, “HITECH Act programs and regulations address the most pressing obstacles to the adoption and meaningful use of EHRs and strive to create an electronic circulatory system for health information that nourishes the practice of medicine, research, and public health, making health care professionals better at what they do and the American people healthier.” Figure 1-5 shows the concept of how the various programs within ONC are envisioned to support each other and the objective of improved patient outcomes.

As described previously, the State HIE Cooperative Agreement Programs and the HIT Regional Extension Center programs are being put into place as resources to help you as you form and operate your HIE. It is critical that you also become familiar with the programs created in your own state. Get to know the people involved with these programs. Consider actively involving them in your planning and formation efforts. It is important that you take advantage of all the resources available to you.

Now that you are equipped with a high-level understanding of the environment in which you will be forming your HIE, *let's get started!*
Figure 1-5: The HITECH Vision. Adapted from the Department of Health & Human Services, Office of the National Coordinator for Health Information Technology. Celebrating the First Anniversary of the HITECH Act and Looking to the Future. February, 2010.

REFERENCES


