

Issues in Missouri Health Care 2011

Electronic Health Records and Health Information Exchange

Acknowledgement

This is one in a series of issue papers on critical health care issues facing Missouri and the nation prepared by Health Management Associates, Inc., a national health care policy research and consulting firm, and made possible by funding from the Missouri Foundation for Health and the Healthcare Foundation of Greater Kansas City. The papers are intended to provide nonpartisan expert analysis in an accessible format that will contribute to the public dialogue on the state of health care in Missouri. Questions should be directed to Thomas McAuliffe, Policy Analyst, Missouri Foundation for Health, 314.345.5574, tmcauliffe@mffh.org.

Issue Statement

The American health care system offers some of the most advanced and effective care in the world—but it also is fragmented and inefficient, does not emphasize quality, and makes it difficult for consumers to compare price and quality. As a result, the U.S. spends more per capita on health care than any other developed country, but achieves equal or lower results in terms of health outcomes and access to services.

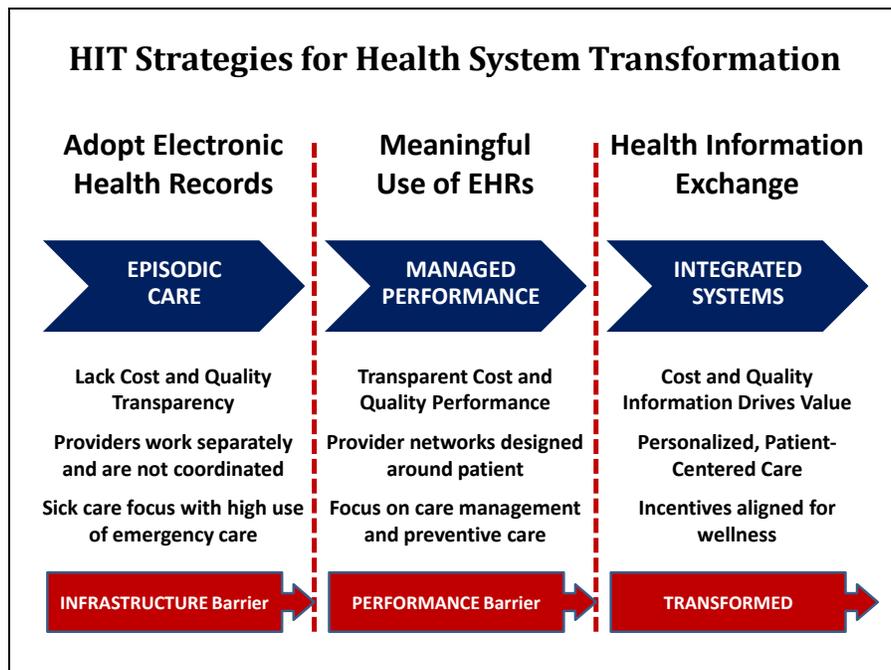
Modern health information technology (HIT) offers unprecedented opportunities to improve health care for Americans, promising better quality at a lower cost. Policymakers from all spheres have demonstrated a strong interest in using electronic health records (EHR) and an electronic health information exchange (HIE) to achieve a health care system that is efficient, effective, safe, accessible, transparent, and affordable for all Americans.

The Vision: Leveraging HIT to Transform Health Care Delivery Systems

Widespread adoption of EHRs and electronic HIE (see Appendix A for definitions of common terms) have the potential to improve individual and population health outcomes, make information about quality and cost transparent, and provide data necessary to study and improve care delivery. HIE can help consumers and patients manage their own health, help doctors and hospitals immediately gather relevant information to best treat an individual patient, improve tracking of chronic disease management, and provide for early detection of infectious disease outbreaks.

Many health care institutions have been investing in computerized systems for years, but only to automate the administrative or back-office work within the institution. Often these legacy systems “trap” personal health information inside an institution and perpetuate episodic rather than integrated care (Figure 1). New systems are being designed to overcome these barriers and, going forward, they will allow health care providers to adopt “interoperable” EHRs that have the capability to exchange electronic health information with other sources.

Figure 1.



The meaningful use of EHR technology supports cost and quality transparency, productive interchange between provider and patient, and health care providers' ability to provide cost-effective care management and use clinical decision support tools to reduce cost and quality variances (Figure 1). Health care providers who use EHRs in a meaningful way have the potential to improve health system performance as a result of:

- Higher quality care through adherence to treatment protocols and guidelines;
- Reduction in adverse drug events and detection of pending patient error;
- Fewer duplicative treatments and tests;
- Administrative efficiencies through decreased paperwork;
- Improved population health and coordination of clinical care as a result of timely and appropriate access to individual and community health information;
- Early detection of infectious disease outbreaks around the country;
- Disease management tracking; and
- More complete data sources for use in research and policy.¹

Ultimately, electronic HIE across different sites enables the aggregation and tracking of episodes of care around clinical data, and facilitates new models of integrated care delivery (medical homes are one example) to align incentives for wellness and organize care around the patient (Figure 1).

¹ J. Walker, "Electronic Medical Records and Health Care Transformation," *Health Affairs*, 24, no.5 (2005).

HIE also facilitates transparency to more easily identify unnecessary costs, and supports new payment and delivery models such as “accountable care organizations,” or groups of physicians and other providers who take joint responsibility for the health outcomes and overall cost of care for their patients. EHRs and HIE are important prerequisites for redesigning health care delivery systems and improving overall health system performance.

The Current Reality: Overcoming Barriers and Building on Strengths

Despite the clear benefits of adopting EHRs, there also are significant barriers. The technology exists, but it remains far from universally deployed throughout the health care system, particularly for small and medium-sized physician practices and community health centers. Some of the most significant barriers to adopting EHRs include:

- *Misaligned financial incentives:* The purchasers of EHRs—hospitals, physician practices, and other direct care settings—absorb purchase and maintenance costs but do not necessarily see equivalent return on their investment. Financial benefits more frequently accrue to health plans, employers, and coverage programs that see a decrease in redundant health care services, avoidable hospitalizations, and medical errors.
- *Privacy and security concerns:* Storing, moving, and sharing health information in electronic form raises questions about how to protect patient privacy and data security.
- *Standards for system interoperability are used inconsistently:* Data and technical standards exist but are frequently implemented differently. And many large systems, including state Medicaid programs, are reluctant to overhaul “legacy” systems.
- *Publicly funded programs face unique challenges:* States can promote EHRs and HIE in publicly funded programs, including Medicaid and state employee benefit programs. But disparate and antiquated data systems, the way those systems are financed from multiple sources, and limited workforce and other resources to support HIT initiatives are all barriers to adopting HIT.

As a result of these barriers, nationally less than half of physician practices (44%) report using an EHR. In Missouri, there is only limited information about the status of HIT and EHR adoption among health care providers. In response to informal surveys, the following percentages of health care providers report they have implemented and use an EHR:

- 83% of hospitals;
- 54% of family physicians, and another 18% report they will soon;
- Less than 10% of rural health clinics;
- 95% of Federally Qualified Health Centers; and

- 92% of chain pharmacies and 64% of independent pharmacies.²

The EHR use rates described above may be overstated. For example, in response to a survey conducted by the Missouri Hospital Association, most hospitals (83%) reported some level of EHR adoption, but only 8% actually had achieved full implementation based on criteria defined by the Office of the National Coordinator for HIT. Most hospitals (75%) have achieved a basic level of implementation. Other providers may be in a similar situation, with a basic EHR implementation in place, but may have further to go to achieve full implementation and meaningful use.

The state of Missouri and the private sector have launched several collaborative initiatives to overcome barriers to HIT, accelerate the adoption of EHRs, and develop electronic HIE (Figure 2). The state is in a strong position to build on these existing initiatives, align them with statewide priorities for health system transformation, and make the case that Missouri is ready to receive federal support to further expand EHR and HIE capacity.

Federal Framework: Stimulating State-Level Initiatives

Since 2004, the federal government has taken an increasing role in guiding and supporting state-level HIT initiatives. In 2009, the federal role expanded considerably as a result of the Health Information Technology for Economic and Clinical Health (HITECH) Act, which was enacted as part of the American Recovery and Reinvestment Act of 2009 (ARRA). The HITECH Act provides an unprecedented opportunity for states to access federal funds to plan, design, and implement the infrastructure to support statewide HIE and the adoption and use of EHRs. Federal HITECH funding opportunities include:

- *State HIE Cooperative Agreement Program*: A \$564 million grant program to support states or State Designated Entities in establishing health information exchange capability among health care providers and hospitals in their jurisdictions.
- *HIT Extension Program*: A \$677 million grant program to establish a nationwide system of Regional Extension Centers (RECs) to offer technical assistance, guidance, and best practices to assist providers in becoming meaningful users of EHRs.
- *Medicare and Medicaid EHR Meaningful Use Incentives*: Up to \$44 billion in Medicare and Medicaid incentive payments for eligible health care providers who “meaningfully use” certified EHR technologies.

² MO-HITECH Health Information Exchange Operational Plan: FINAL (June 30, 2010), page 57.

Figure 2. Missouri's Current Health Information Exchange Infrastructure

Project Name	Sponsor	Location	Description
<i>Private Statewide Initiatives</i>			
Hospital Industry Data Institute (HIDI)	Missouri Hospital Association	MO, AK, GA, KA, OK, TN, VA, WA, WY	Data services for 900 hospitals nationwide
Missouri Quality Improvement Network (MOQUIN)	Missouri Primary Care Association	Statewide	Clinical quality measures reporting, monitoring, improvement for FQHCs
Missouri Telehealth Network (MTN)	University of Missouri	Statewide	Connecting 200 hospitals, FQHCs and mental health centers in 58 counties
<i>Private Regional HIE Initiatives</i>			
CareEntrust	Kansas City area businesses	Kansas City Bi-State Area	Online health record for 100,000 employees and dependents
Kansas City Bi-State HIE (KCBHIE)	Mid-American Regional Council (MARC) and Kansas City area providers	Kansas City Bi-State Area	Emerging network of existing data networks
Kansas City Quality Improvement Consortium (KCQIC)	UAW-Ford Community Health Care Initiative	Kansas City Bi-State Area	Agency for Healthcare Research and Quality Chartered Value Exchange
KC CareLink	BCBS of Kansas City, Health Care Foundation of Kansas City, and other funders	Kansas City Bi-State Area	Connecting 14 safety net providers serving 185,000 patients
Lewis and Clark Information Exchange (LACIE)	Heartland Health	Four-state corner area (MO, KS, NE, IA)	First fully operational multi-state HIE in the country
Midwest Health Initiative (MHI)	St. Louis Area Business Health Coalition (BHC)	St. Louis MSA and 16 counties west	Database of claims representing 1.2 million lives for quality reporting
St. Louis Integrated Health Network	St. Louis Regional Health Commission (RHC)	St. Louis region	Network master patient index across 18 safety net providers serving 200,000 patients
Tiger Institute for Health Innovation	University of Missouri and Cerner Corporation	University of Missouri Health Care locations	Connecting UM Health Care hospitals, clinics and pharmacies
<i>Public Initiatives</i>			
State of Missouri Multi-Department Assessment	MO Dept. of Health and Senior Services (DHSS), Mental Health (DMH), and Social Services HealthNet Division (Medicaid)	Statewide	Collaborative agreement to implement HIE for shared clients
Missouri Health Strategic Architectures and Information Cooperative (MOHSAIC)	Department of Health and Senior Services (DHSS)	Statewide	Integrated statewide network of client demographic and health information
Public Health Information Network (PHIN)	Department of Health and Senior Services (DHSS)	Statewide	MOHSAIC reports public health information to CDC
MO HealthNet	MO Dept. of Social Services HealthNet Division (Medicaid)	Statewide	Connecting to other HIE partners

Source: MO-HITECH HIE Operational Plan: Final (June 30, 2010)

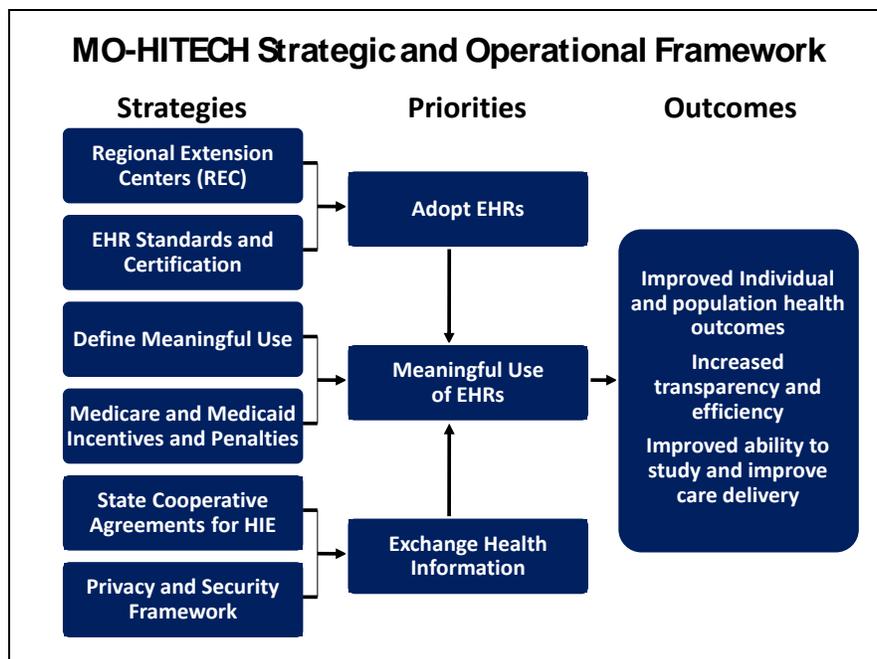
Combined, these programs build the foundation for every American to benefit from an EHR, as part of a modernized, interconnected, and vastly improved system of care delivery. Eventually,

the federal vision is to connect state-level HIE initiatives to a National Health Information Network (NHIN) that securely connects providers, health systems, consumers and communities to electronically share health information. This “network of networks” is not envisioned as a national, centralized repository or data store. Instead, the interconnected networks will share common services and adhere to standards and requirements to enable interoperability, while information remains stored within the organizations where it was created.

State Leadership: MO-HITECH

On November 4, 2009, following the passage of the federal HITECH Act, Governor Jay Nixon created the Missouri Office of Health Information Technology (MO-HITECH) to promote the development and implementation of an effective HIT infrastructure for the State of Missouri. MO-HITECH is guided by a Strategic Plan and an Operational Plan that reflect priorities in the federal HITECH Act, including the widespread adoption and meaningful use of certified EHR systems, and the development of a statewide HIE infrastructure (Figure 3).

Figure 3.



Missouri’s specific strategies to adopt and use EHRs and exchange health information electronically complement and advance federal HITECH priorities. MO-HITECH strategies include:

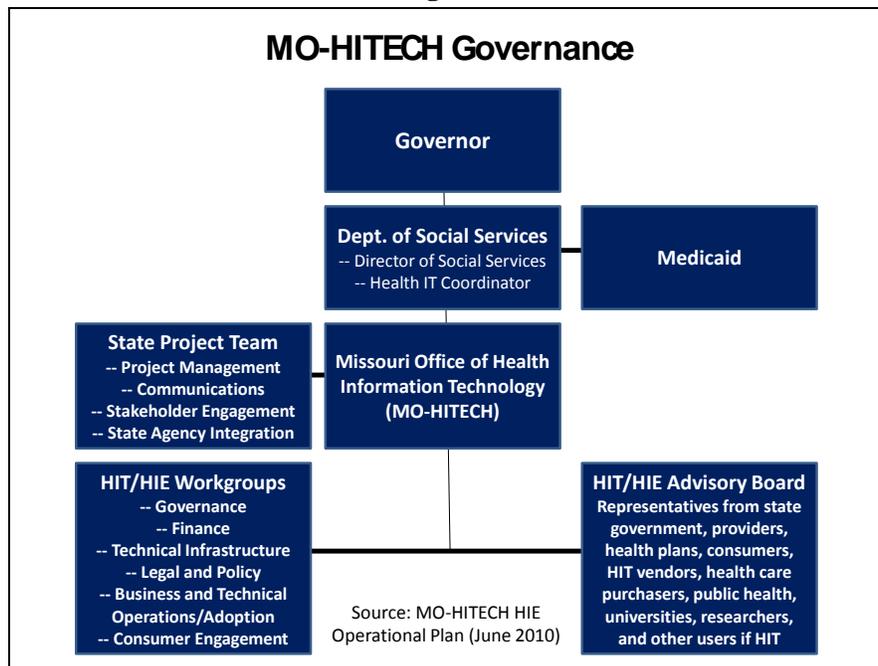
- *Creating a Regional Extension Center (REC):* On April 6, 2010, the Missouri HIT Assistance Center was awarded \$6.8 million to serve as a REC for the state of Missouri and help 1,200 primary care providers select, adopt, implement, and meaningfully use EHRs within two years (by 2012). The Center is a partnership among several organizations led by the

University of Missouri and including the Missouri Primary Care Association, Kansas City Quality Improvement Consortium, Missouri Telehealth Network, and Primaris (Missouri's Quality Improvement Organization). The Center also plans to partner with the Hospital Industry Data Institute, a subsidiary of the Missouri Hospital Association, to serve 55 critical access and rural hospitals around the state. The Center's partner organizations have been active participants in the MO-HITECH initiative, which is committed to working with the Center to identify opportunities for collaboration, provider education, and technical assistance, among others.

- *Defining Meaningful Use:* On July 28, 2010, the Office of the National Coordinator (ONC) issued a Final Rule that provides guidelines to health professionals and hospitals on how to adopt and use electronic health record technology in a meaningful way. Meaningful use requires: (1) use of a certified EHR technology in a meaningful manner, which includes the use of electronic prescribing; (2) use of a certified EHR technology that is connected in a manner that provides for the electronic exchange of health information to improve the quality of health care; and (3) use of a certified EHR to submit information on clinical quality and other outcome measures. One of the critical requirements for meaningful use is that, to be eligible for EHR incentive programs, a provider must use an ONC-certified EHR. Certification criteria are spelled out in federal rules so eligible health professionals and hospitals may be reasonably assured that the systems they adopt are capable of performing the required functions.
- *Implementing Medicaid Meaningful Use Incentives:* The HITECH Act authorizes the Centers for Medicare and Medicaid Services (CMS) to provide reimbursement incentives for eligible professionals and hospitals who are successful in becoming "meaningful users" of certified EHR technology. Eligible physicians can earn up to \$44,000 in Medicare incentive payments over five years, or up to \$63,750 over six years, but not both. Missouri's Medicaid program (MO HealthNet) is responsible for the administration and oversight of Medicaid meaningful use incentive payments. Current public health and clinical quality reporting and Missouri's HIE goals will be integrated into MO HealthNet meaningful use definitions. Missouri's statewide HIE goals, objectives, and capacities have been integrated into statewide Medicaid planning efforts and incorporated into Missouri's State Medicaid HIT Draft Plan. The goal of the Medicaid HIT Draft Plan is to coordinate MO HealthNet incentives with federal Medicare meaningful use definitions to avoid duplicating provider payments and facilitate provider enrollment in the most appropriate incentive program.
- *Establishing a State Level Framework for HIE:* On February 12, 2010, ONC awarded a \$13.8 million grant to the Missouri Department of Social Services to rapidly build the state's HIE capacity. As noted above, the state established a state-level authority for HIT planning and implementation, called the Missouri Office of Health Information Technology (MO-HITECH). MO-HITECH coordinates all of the state's HIT and HIE development activities through a state project team representing multiple state agencies including MO HealthNet,

workgroups that develop HIT/HIE policy recommendations, and an advisory board representing a diverse group of HIT stakeholders (Figure 4).

Figure 4.



Next Steps: Transitioning to a Statewide Health Information Organization

Over the next few years, the MO-HITECH initiative will transition to a new, nonprofit Statewide Health Information Organization (HIO) overseen by a stakeholder Board of Directors and supported by executive, management, and administrative-level staff. Most of the current MO-HITECH workgroups are expected to continue under the Statewide HIO. During the transition, the continuing workgroups will be supported by a combination of consulting staff and Statewide HIO staff, but ultimately the HIO staff will support all workgroups and the overall collaborative stakeholder process.

When fully implemented, Missouri's Statewide HIO will develop and oversee statewide policy guidance, as well as shared core technical infrastructure and services. Specifically, the Statewide HIO will:

- Define clear and consistent goals for participation in the statewide HIE;
- Define and adopt business, technical, and operational policies that participants comply with as participants in the statewide HIE;
- Act as the agent for distribution of state and federal grant funds for statewide HIE development;
- Ensure the availability of statewide technology services;

- Coordinate with the Missouri HIT Assistance Center;
- Establish business models for a sustainable, self-financing Statewide HIO; and
- Have the authority through contractual relationships to ensure compliance, enforce policies, and resolve disputes relating to participation in the statewide HIE.

Ultimately, the goal of Missouri's Statewide HIO is to leverage HIT to transform health care delivery systems and improve overall health system performance. By encouraging the widespread adoption of EHRs and electronic HIE, the Statewide HIO has the potential to improve individual and population health outcomes, make information about quality and cost transparent, and provide data necessary to study and improve care delivery. With continued focus, these strategies will contribute to achieving a health care system that is efficient, effective, safe, accessible, transparent, and affordable for all Americans.

Appendix A: Definitions of Common Terms

The rate of innovation in HIT over the past decade is unprecedented. The mainstream use of the Internet and the transfer of proven technology from other sectors into health care have created new and powerful policy solutions. Many of these concepts are intertwined, and there is logic in how they fit together, each element building on another, as described below:

Electronic health record (EHR)

As defined in the ARRA, an Electronic Health Record (EHR) means an electronic record of health-related information on an individual. It includes patient demographic and clinical health information such as medical histories and problem lists. It also has the capacity to provide clinical decision support; support physician order entry; capture and query information relevant to health care quality; and exchange electronic health information with, and integrate such information from, other sources.

EHR Meaningful Use

Meaningful use meets the following requirements: (1) use of a certified EHR technology in a meaningful manner, which includes the use of electronic prescribing;

(2) use of a certified EHR technology that is connected in a manner that provides for the electronic exchange of health information to improve the quality of health care; and (3) use of a certified EHR technology to submit information on clinical quality and other measures as selected by the Secretary of the U.S. Department of Health and Human Services (HHS).

Health Information Technology (HIT)

As defined in the ARRA, Health Information Technology means hardware, software, integrated technologies or related licenses, intellectual property, upgrades, or packaged solutions sold as services that are designed for or support use by health care entities or patients for the electronic creation, maintenance, access, or exchange of health information.

Health Information Exchange (HIE)

As defined by the Office of the National Coordinator, Health Information Exchange (HIE) means the electronic movement of health-related information among organizations according to nationally recognized standards. A **Health Information Organization (HIO)** oversees and governs HIE.

Nationwide Health Information Network (NHIN)

A national effort to establish a network to improve the quality and safety of care, reduce errors, increase the speed and accuracy of treatment, improve efficiency, and reduce health care costs.

Office of the National Coordinator for HIT (ONC)

The principal advisor to the Secretary of HHS on the development, application, and use of health information technology. This office coordinates HHS's health information technology policies and programs internally and with other relevant executive branch agencies. It develops, maintains, and directs the implementation of HHS' strategic plan to guide the nationwide implementation of interoperable health information technology in the public and private health care sectors.

Resources

Primary Sources for this Paper

- Health IT Home, Office of the National Coordinator (accessed online October 24, 2010)
- MO-HITECH Health Information Exchange Strategic Plan: FINAL (March 17, 2010)
- MO-HITECH Health Information Exchange Operational Plan: FINAL (June 30, 2010)
- Missouri State Medicaid Health Information Technology Plan: DRAFT (October 5, 2010)

Organizations

- American Health Information Community: AHIC is a federal advisory body, chartered to make recommendations to the Secretary of HHS on how to accelerate the development and adoption of Health IT.
- Agency for Healthcare Research and Quality: AHRQ funds HIT research and development programs with a focus on rural and underserved areas. AHRQ is providing technical assistance to Medicaid and SCHIP agencies to help them develop, implement, and participate in HIT and HIE.
- Centers for Medicaid and Medicare Services: CMS is providing financial incentives through Medicare and Medicaid to physician practices and hospitals that use certified EHRs.
- Certification Commission for Healthcare Information Technology: CCHIT is a voluntary, private-sector organization working with ONC to develop and evaluate certification criteria for electronic health records and components of developing personal health records.
- Healthcare Information Technology Standards Panel: HTSP is a public-private partnership with broad participation across more than 300 health related organizations. It is working to identify and harmonize data and technical standards for specific priorities advanced by the American Health Information Community.
- Health Resources and Services Administration: HRSA provides technical assistance to health centers and other HRSA grantees in adopting model practices and technologies to meet the needs of people who are uninsured, underserved and/or have special needs.
- Office of the National Coordinator for Health Information Technology: ONC provides leadership for the development and implementation of a nationwide health IT infrastructure, and coordinates efforts to make an electronic medical record available for most Americans by 2014.
- State Alliance for E-Health: The National Governors Association is working with ONC to manage the State Alliance, a consensus-based, executive-level body of state elected and appointed officials to collectively address state-level HIT issues and challenges to an interoperable electronic health information exchange.

Other HIT associations include the American Health Information Management Association and the Healthcare Information and Management Systems Society.