

Health Information Technology: State and Regional Demonstration Projects

The mission of AHRQ is to improve the quality, safety, efficiency, and effectiveness of health care by:

- Using evidence to improve health care.
- Improving health care outcomes through research.
- Transforming research into practice.

Introduction

In 2004, the Agency for Healthcare Research and Quality (AHRQ) awarded five “State and Regional Demonstrations (SRDs) in Health Information Technology” contracts to organizations in Colorado, Indiana, Rhode Island, Tennessee, and Utah. A sixth contract, awarded to Delaware, was added in 2005. The 5-year, \$5 million projects were aimed at developing data sharing at the regional or State level, with the overarching goal of improving the quality, safety, efficiency, and effectiveness of health care for patients and populations.

Although the six SRDs each completed a common set of deliverables, over the course of the contracts, they also developed a variety of approaches with different technical, business, and governance models. The results of the SRDs’ work have informed the types of organizations that may serve as data sharing partners, the policies that pertain to this work, and the sustainability plans for health

information exchange (HIE) in their States. The SRDs are involved with some aspect of the statewide HIE, Regional Extension Center, and/or Beacon Community cooperative agreements, which are supported by the Office of the National Coordinator for Health IT, as funded under the Health Information Technology for Economic and Clinical Health Act of the 2009 American Recovery and Reinvestment Act. An overview of each project and its key achievements is provided here.

State and Regional HIE Projects

Colorado Regional Health Information Organization (CORHIO)

CORHIO began as a nonprofit organization aimed at building a prototype federated data exchange among its four initial partners: Denver Health, Kaiser Permanente of Colorado, The Children’s Hospital, and University of Colorado Hospital. CORHIO and its partners went live with a 1-year data exchange demonstration on December 1, 2008. The system offered the authorized





emergency department (ED) practitioners at three sites and call center employees at one site access to the most common radiology reports, laboratory results, prescribed and dispensed medication information, registration information, electrocardiogram images and/or reports, and problem lists aggregated from all sites. CORHIO's achievements include the development of a useful enterprise Master Patient Index (MPI) and a robust set of policies that can be applied to future HIE efforts. Following the conclusion of its SRD contract, CORHIO has contracted with a new vendor and will be implementing a clinical messaging service. CORHIO is also developing a multiyear plan to bring services to multiple communities across the State.

Delaware Health Information Network (DHIN). DHIN was created by an act of the Delaware General Assembly, which was signed into law in 1997 to advance the creation of a statewide health information and electronic data interchange network for public and private use. In 2007, DHIN became the first operational statewide clinical HIE. Four of Delaware's hospital systems currently provide data through the DHIN (a fifth will be added in fall 2010), along with LabCorp, Quest Diagnostics, and Doctors Pathology Services, a local pathology laboratory. Taken together, DHIN's data senders provide more than 85 percent of laboratory tests and 81 percent of hospital admissions performed in the State of Delaware. Since going live, DHIN has worked to add value for Delaware's health care community by providing new data types (e.g., transcribed reports) and new functions (e.g., medication history). As of July 2010, DHIN's users include 65 percent of the State's health care providers working at more than 230 practices

around the State. DHIN is currently transitioning to a new nonprofit, public/private governance structure that will support ongoing operations and the expansion of services.

Indiana Network for Patient Care (INPC). The INPC was created by Regenstrief Institute in 1994, with the goal of providing clinical information at the point of care for treating patients in the ED. For the SRD project, Regenstrief Institute expanded its activities by bringing on new data sharing partners, provided additional interfaces for laboratory and pathology data, and expanded its activities outside Indianapolis to other surrounding geographic areas. They are also seeking to resolve issues related to scalability and data normalization, given the huge volume of data and number of transactions (INPC processes an average of 2.5 million Health Level 7 messages per week). INPC captures data from a wide range of sources, including over 50 hospitals, physician practices, public health departments, laboratories, radiology centers, pharmacies, pharmacy benefit managers (via SureScripts®), payers, convenience clinics (e.g., those attached to a pharmacy), and long-term care facilities. As of July 2010, the INPC included more than 3 billion coded results, 526 million encounters, and over 53 million text reports. As part of its evaluation, Regenstrief Institute is measuring the value of aggregated clinical data delivered by the INPC for quality improvement. The expected outcome is improved provider compliance with selected clinical quality measures.

Rhode Island: currentcare. The Rhode Island Department of Health (HEALTH) applied for and received the SRD contract from AHRQ on behalf of stakeholders across the State.

Development of the statewide exchange, known as *currentcare*, has been a collaborative effort between HEALTH and the Rhode Island Quality Institute (RIQI). Project governance has been led by RIQI, which became the State-designated health information organization in 2008 and which received contractual and operational responsibility for *currentcare* in July 2010. The project's goals are to design, develop, test, deploy, and evaluate an initial health information network to support the secure and reliable exchange of health information, beginning with laboratory results and medication history information. The system is envisioned to link longitudinal patient-level information from source data systems using an MPI, provide a Web-accessible viewer to authorized users in any setting, and interface with electronic health record systems. One of this project's most important achievements is the development of a broad set of governance, management, and operating policies for *currentcare*. These policies are integral to ensuring compliance with the RI HIE Act of 2008, which stipulates privacy and confidentiality protections for *currentcare* that are stricter than some State and Federal health information privacy laws. The project's evaluation will focus on the development of those policies.

Tennessee: MidSouth eHealth Alliance. The MidSouth eHealth Alliance was formed as a policy-setting body to govern the HIE in Memphis, TN, sponsored by the State of Tennessee and managed in its first 4 years under a sole subcontract to Vanderbilt University. During the initial years, all technical and administrative functions were provided by Vanderbilt. Complete control of the Exchange has been transferred from Vanderbilt and the State to the MidSouth eHealth Alliance.

Data services have migrated from Vanderbilt Medical Center to an independent corporation—Informatics Corporation of America. The Exchange began serving clinicians in May 2006 and, as of March 2010, data from 14 hospitals (inpatient and outpatient), 14 primary care safety-net clinics, and the University of Tennessee Medical Group were available to several hundred clinicians working in 14 EDs, 14 primary care clinics, and in hospitals. The overall data are composed of admission, discharge, and transfer data (patient registration data), encounter codes, and clinical data. The latter include laboratory results, diagnostic imaging reports, cardiac study reports, discharge summaries, dictated ED notes, operative notes, history and physical exams, diagnostic codes, patient demographics and other identification, and encounter data. Clinical data, particularly hospital discharge summaries, are most widely used. In the EDs, data are accessed on approximately 7 percent of ED visits.

Utah Health Information Network (UHIN). UHIN is a nonprofit whose partners include physicians, hospitals, laboratories, payers, local health departments, and health centers. UHIN's project initially involved enhancing the existing gateway for administrative exchange to build clinical information exchange. Ultimately, UHIN and its stakeholders decided to purchase a clinical platform to facilitate clinical exchange, which they call the Clinical Health Information Exchange (cHIE). The cHIE has a modest electronic medical record (EMR), commonly referred to as "EMR lite," if needed by the clinician (most clinicians in Utah have an EMR); an MPI; results delivery; e-prescribing; and virtual health records query functionality. UHIN is enrolling key data sources and



building support among health care providers for participation in the cHIE. As of June 2010, laboratory data is being supplied by two data sources and seven clinics are connected to the cHIE. UHIN has developed a patient consent policy for use with the cHIE. As part of its evaluation, UHIN is analyzing providers' workflow before and after they implement use of the cHIE at their sites.

For More Information

For additional information on AHRQ health IT projects, please visit www.healthit.ahrq.gov or contact staff at the AHRQ National Resource Center (NRC) for Health IT at NRC-HealthIT@ahrq.hhs.gov.

