

## Learnings for Implementing Electronic Exchange of Health Information: A Synthesis of AHRQ's Health Information Exchange Projects

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### Target Population: General

**Summary:** Over the past few years, extensive peer-reviewed and grey literature has indicated that implementing health information exchange (HIE) requires special organization-specific considerations and may pose challenges similar to those associated with the implementation of electronic health records. This project focuses on understanding key lessons learned by the six Agency for Healthcare Research and Quality (AHRQ)-funded State and Regional Demonstrations in Health Information Technology (SRDs) and creating a catalog of resources for HIE stakeholders.

These States and their respective health information organizations (HIOs) are:

- Colorado: Colorado Regional Health Information Organization (CORHIO)
- Delaware: Delaware Health Information Network (DHIN)
- Indiana: Indiana Network for Patient Care (INPC)
- Rhode Island: currentcare
- Tennessee: Mid-South e-Health Alliance (MSeHA), project management team from Vanderbilt University Center for Better Health
- Utah: Utah Health Information Network (UHIN)

The AFYA project team collaborated with the SRD projects to synthesize information on the challenges and success factors for developing sustainable community, statewide, or regional exchange of health information. A comprehensive literature review and environmental scan was done among peer-reviewed publications, evaluation reports, industry publications, and HIE support tools. The project yielded a synthesis report, which presents narrative profiles for each of the SRDs and a summary of experiences and lessons learned. In addition, the research team compiled sample documents from the project teams to include in the AHRQ National Resource Center on Health Information Technology resource repository.

### Project Objectives:

- Conduct a comprehensive literature review and environmental scan of projects, progress, lessons learned, and available resources in the HIE field. **(Achieved)**
- Develop and implement a scientifically rigorous approach to working collaboratively with AHRQ SRDs in health information technology. **(Achieved)**
- Develop a detailed HIE synthesis report with recommendations for the adoption of processes that will promote HIE. **(Achieved)**

- Identify sample documents for the AHRQ National Resource Center resource repository to help accelerate HIE in other communities. **(Achieved)**

**2010 Activities:** Activities focused on collecting HIE tools and resources and completing the SRD case studies. Steps toward completing these studies included: 1) collection and analysis of the content of documents with relevant data, such as project meeting notes and progress reports to AHRQ; 2) conducting preliminary phone interviews to confirm data extracted from documents and discuss processes and lessons learned during project implementation; 3) synthesis and summarization of documents and interview data to identify gaps and draft an initial narrative description; and 4) followup phone interviews to discuss details of decision rationales, mechanisms of implementation, and lessons learned.

**Impact and Findings:** The SRD projects each took critical steps towards implementation and system development in order to create stable HIOs and establish HIE. The multi-year terms of the SRD projects provided HIOs with the time necessary to gain an understanding of community and business stakeholders' perspectives and to develop policy and technical systems to meet their needs. Lessons learned focused on the importance of project management skills, strategic planning, stakeholder engagement, business development, and ensuring responsiveness to community needs and concerns. Engaging community stakeholders, developing effective management plans, and planning for long-term sustainability presented the main challenges. All HIOs agreed that technical development was the least challenging aspect of implementation and operations.

The following are key lessons that HIOs learned:

- **Project Planning and Management:** All HIOs determined that setting goals and defining the operational steps of achieving those goals was critical for success.
- **Building Community Trust:** HIOs agreed that building community trust is accomplished through stakeholder engagement and addressing concerns about privacy.
- **Project Implementation:** Since policy and technical operations are mutually informative, HIE organizations should develop both simultaneously. HIOs agreed that it is essential for a leader with decision making authority to define a concrete plan for progress and completion.
- **Technical Considerations:** The HIOs provided valuable information by testing different technical solutions. Areas for which continued work is needed include electronic Master Patient Index development and patient matching algorithms. New elements of the exchange must be technically tested and must meet business value criteria before they can be effectively implemented. Some HIOs developed specific methodologies for technical testing and business assessment that they applied to new capabilities and data types.
- **Demonstrating Value:** HIOs reported that they demonstrate value most effectively when they present how the exchange decreases expenses of participating organizations and simplifies information exchange procedures. HIOs must discuss the value of participation in an exchange in a way that goes beyond simple monetary discussions. Saving money is an integral part of the value proposition but a more comprehensive appeal for participation is necessary to promote participation in a regional or State exchange.
- **Sustainability:** Long-term sustainability requires a nuanced understanding of stakeholders' perspectives and priorities and the ability to present individualized value propositions based on this understanding. In addition, while HIEs may offer large return on investment across stakeholders, the savings may be diffuse. HIOs must develop value propositions that take this into account. Markets and technologies for HIE evolve rapidly and vary across different regions. HIOs must focus on developing core ideas that can remain relevant in response to changes and variations.

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**Strategic Goal:** Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care across transitions, and the electronic exchange of health information to improve quality of care.

**Business Goal:** Synthesis and Dissemination