State and Regional Demonstrations in Health Information Technology

Principal Investigator:	Frisse, Mark, M.D., M.S., M.B.A.
Organization:	State of Tennessee
Contract Number:	290-04-0006
Project Period:	September 2004 – September 2010
AHRQ Funding Amount:	$5,000,000
Summary Status as of:	September 2010, Completion of Contract

Target Population: General

Summary: Health care providers can make better care and treatment decisions when they have as much information (laboratory tests, medical history, medicines, etc.) as possible about a patient's health. The MidSouth eHealth Alliance (MSeHA or the Alliance) implemented and evaluated a regional data-sharing and interoperability service for health care entities in the Greater Memphis area, which encompasses counties in southwest Tennessee, northern Mississippi, and northeastern Arkansas. The MSeHA is a nonprofit organization that works in conjunction with the Vanderbilt University Regional Informatics Team. Stakeholders include patients, primary care providers, specialty care providers, inpatient and emergency room care teams, health systems, safety net clinics, and State and local governments. The Alliance enables providers to review medical information from several organizations quickly while restricting access to a patient's medical information to current and direct care providers. This project is one of six Agency for Healthcare Research and Quality-sponsored State and Regional demonstration projects begun in late 2004 and early 2005 to create a State or regional health information exchange (HIE).

MSeHA has gained State and national recognition for its approach to privacy, security, and confidentiality. Its data-sharing agreements, policies, and operating committee infrastructure have been adapted by more than 30 organizations and States. The Alliance began with a focus on improving the quality of patient care while maintaining or decreasing the cost of care delivery. This project expands the initial focus by evaluating use and adoption, usability, reduction of duplicate tests, impact on specific complaints (e.g. chest pain), workflow, and financial impact. The lessons learned and work products are being applied across the State.

Project Objectives:

- Facilitate the exchange of clinical data elements among providers in a three-county region with a population of about 1 million. **(Achieved)**
- Leverage the Vanderbilt technical architecture to initiate the exchange and eventual transition to an independent platform. **(Achieved)**
- Expand the number of participating organizations to remaining safety net providers and primary care ambulatory providers. **(Achieved)**
- Develop a business model for sustainability. **(Achieved)**

2010 Activities: Since 2005, the nonprofit MSeHA has governed and managed HIE services among 14 major health care provider organizations in the Memphis, Tennessee metropolitan area. Information available from participating organizations varies slightly among organizations. All major hospitals provide hospital discharge summary notes, laboratory data, pathology reports, radiographic reports, select transcribed notes, and a range of other clinical and administrative documents. Other participating organizations provide demographic information, registration information, and a limited number of clinical data types. Clinicians began accessing HIE data in emergency departments in May 2006 and later obtained access on hospital wards and in ambulatory clinics. As of October 2010, clinicians had access to over 7.5 million encounter records on 1.7 million patients, 4.9 million chief complaints, 45 million laboratory tests, 5 million radiology reports, and 2.1 million other reports and documents. Patients are offered the chance to "opt out" from HIE participation at the time of each encounter at participating hospitals and clinics.

Impact and Findings: The overarching findings from this study suggest that both the process and technical models can make substantial contributions to national HIE. The Vanderbilt-based architecture was shown to be a robust, scalable, and very inexpensive model for HIE. As a wider array of ambulatory-based electronic health records, laboratory devices, and other technologies are integrated there will be a convergence of issues regarding data centralization, privacy considerations, and data sharing provisions. Therefore, future HIE efforts will realize even greater cost benefits. This broader integration will foster more effective care coordination and allow for demonstration of care impact across entire populations and not just those who seek hospital or emergency department care. Additional findings will be forthcoming in future publications.

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

Business Goal: Implementation and Use